Case Study of the Application of the Kirkpatrick Model to the Joint Special Operations University's Educational Programs

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ABSTRACT

This applied research study contributes to the understanding of the application of the Kirkpatrick Model to the Joint Special Operations University's (JSOU) educational programs. This study examined the rationale for evaluating training and education programs, the four essential elements of the Kirkpatrick Model, the industry application of the Kirkpatrick Model and compares and contrasts the Kirkpatrick Model with the other leading evaluation program, Phillips Return on Investment (ROI) Model. The Kirkpatrick Method, along with its hybrid associate, the Phillips ROI Model, is the standard for evaluating most government and private industry training programs, as evidenced by numerous industry and government documents that reference Kirkpatrick and ROI as the models to emulate. Though initially designed for evaluating training programs, the Kirkpatrick Model can be readily adapted to higher education, thus providing stakeholders vital information to better assess the value of the education provided. Adaptation of the Kirkpatrick Model in higher education helps to not only clarify criteria for what should be taught but also the assessment of what is being taught concerning desired educational outcomes.

Prior to academic year (AY) 2018, JSOU relied almost exclusively on the Kirkpatrick Model's Level 1 surveys to ascertain the effectiveness of JSOU's mission. This research evaluates how full implementation of the Kirkpatrick Model at JSOU can provide leadership of an open adaptive system with more relevant information that aids in determining the effectiveness of JSOU in performing its mission.

A case study approach was utilized with AY 2018 JSOU data on hand. All four levels of the Kirkpatrick Model of evaluating the effectiveness of training and education programs

were used to evaluate JSOU's AY 2018. The data analysis was reviewed within the context of the singularity of this specific academic year at JSOU. Both qualitative and quantitative data were analyzed so that the complexities of a real-life situation would be studied from multiple perspectives. The data showed a quantitatively minor correlation between the Kirkpatrick Model's Level 1 surveys and JSOU's Level 3 surveys. Qualitatively, JSOU was shown to have an effective process to ensure students were being tested for the desired teaching outcomes (Level 2). Level 4 evaluation was also qualitatively conducted by reviewing surveys and interviews of Special Operations Forces (SOF) senior leaders from JSOU's 2020 Strategic Vision Project. This mixed-methods approach, utilizing all four levels of the Kirkpatrick Model, yielded an overall assumption that JSOU is meeting the SOF unique education needs of its primary customer, the United States Special Operations Command (USSOCOM).

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DEDICATION

This dissertation is dedicated to my father, Donald E. Meade, Lieutenant Colonel, USAF (Ret) who passed while I was enrolled in the doctoral program at Valdosta State University. A man with two masters degrees one of which was in Public Administration, who lived the American dream, grew up in the projects, the first of his family to earn a college degree; all the while working multiple jobs to pay his way, earned an officer's commission and became the epitome of a professional public administrator in his dedicated Air Force service as a personnel officer. He taught me the value of service to our nation, the value of education, the importance of faith, and the dignity of every person regardless of their stature in life.

Chapter I

INTRODUCTION

Introduction to the Problem

This applied research study seeks to contribute to the understanding of the application of the Kirkpatrick Model to the Joint Special Operations University's (JSOU) educational programs. This study examines the rationale for evaluating training and education programs, the four essential elements of the Kirkpatrick Model, and the usage of the Kirkpatrick Model in evaluating the effectiveness of training and education programs. Abrory & Kartowagiran, as cited in Dewi 2018, stated, "An evaluation is a systematic process which generates information about program achievement. It means that the evaluation gives information about whether the objective has been achieved or not. Evaluation is a systematic process to gather data, information, and interpretation so that this can be used as the basis for policymaking, decision-making, or creating another program as the results of the evaluation." (Dewi & Kartowagiran, 2018, pp. 155-163).

The military provides both training and education, and it can be argued, not unlike applied educational programs in higher education institutions, that there is both an element of education and training involved in many Department of Defense (DOD) training programs. For example, to complete a Bachelor of Science in nursing will require hours of in-classroom learning to include everything from anatomy to psychology. However, the program will also require hours of applying what was learned

in the classroom at hospitals and clinics under the guidance of a precept. The nursing students will examine patients, give shots and check vitals. Only through training in a real clinical setting will the nursing student be fully prepared to assume the duties of a fully qualified nurse. These clinical hours will count as education credits toward the student's bachelor's degree (Florida State University, 2019). In this same vein of thought, it can be argued that "military training involves learning that has recognized the academic value. One of the greatest outcomes thus far from the adult and continuing education revolution is precisely this recognition. Some of the learning that is required in a degree program that has been properly designed by and is monitored in the academic community does occur in the process of training. Specifically, military learning is carefully assessed by those who teach the same subject matters in academe, and appropriate academic credit is recommended by the American Council on Education" (American Council on Education, 1996). The author's experience in specialized undergraduate navigator training was a blend of education and training. As a student navigator, the author learned the theories and principles of flight, aviation weather, radar and celestial navigation, to name a few. The author took written examinations with a minimum passing score of 85% to prove the student aviator had gained the required knowledge and then flew training missions where the student aviator had to apply what the trainee learned in a real-world setting.

This study explains how and why most institutions fail to implement all levels of the Kirkpatrick Model and critically examines if partially implementing the Kirkpatrick Model would satisfy the needs of an institution's leadership to make training and education investment decisions. Kirkpatrick Partners is an organization that teaches the

Kirkpatrick Model to corporations and government agencies. Kirkpatrick Partners is run by Donald Kirkpatrick's (the creator of the Kirkpatrick's Four Levels of Evaluation) son, James Kirkpatrick (Ph.D.), and James Kirkpatrick's wife, Wendy Kirkpatrick (Kirkpatrick Partners, 2019). James Kirkpatrick, in his silver certification class, teaches a modification of the original Kirkpatrick Model by stressing that training organizations need to begin with the end in mind by defining the desired results and measuring those first and foremost when possible. However, this may not always be possible. In those situations where it is cost-prohibitive or just not possible to readily obtain Level 4 results, learning officers can build a case of evidence by using the traditional model to measure the value of a training program (Kirkpatrick J., 2018). Beginning with the end in mind regardless of one's ability to effectively measure the desired results still has merit because it enables those tasked with training to devise a program first to identify the preferred results and then build a program to achieve the desired results.

This applied research study examines the four levels of the Kirkpatrick Model as implemented at JSOU in the AY 2018 via a mixed-methods approach and examines a specific quantitative question. That question will focus on quantitative data contained in Levels 1 and 3 evaluations that pertain to the relevancy of the course taken to the service member's job by way of regression analysis. This regression will look for a correlation between specific questions in JSOU's Levels 1 and 3 evaluations. This analysis is only one aspect of the study because a thorough mixed-methods design using the available data is required to show whether the Kirkpatrick Model, is meeting the needs of JSOU's resource decision-makers.

The success or failure of an organization depends largely on the people within

that organization. Whether corporate or government, small or big, organizations invest valuable resources into the training and education of its people. Skilled employees with the proper training and education can propel an organization forward, while an unskilled employee lacking the training and education needed to do his or her job can doom an organization to failure. The United States military as an organization is no different, and it places great emphasis on educating and training its Soldiers, Sailors, Airmen, Marines, DOD civilians and contractors to help ensure the military (also referenced as DOD) achieves its organizational mission which is to "provide the military forces needed to deter war and to protect the security of our country" (DOD, 2018a). The DOD is replete with training and educational organizations that take a person off the street and turn him or her into a productive member of the organization with the required education and training to perform the task he or she is assigned. The DOD is an organization that values education and training and invests in it throughout a Service member's career. The emphasis on education and training is evident from the very beginning where recruits are first introduced into the military way of life in basic training to highly specialized training such as specialized undergraduate pilot training where the Services spend upward of over a million dollars on each young officer to make a pilot. This investment in education and training culminates in senior professional military education (PME) at the senior Service schools such as the National War College, Air War College, Naval War College and Army War College, where senior officers learn critical thinking skills that help them forge national security strategy.

The subject of this study is JSOU. The focus of the study is the Kirkpatrick Model used by the JSOU. JSOU is a system university within the greater system of

training and educational entities within the DOD. JSOU's mission is "to prepare SOF to shape the future strategic environment by providing specialized joint PME, developing SOF-specific undergraduate and postgraduate-level equivalent curriculum and by fostering special operations research, analysis and outreach in support of the United States Special Operations Command (USSOCOM) objectives" (JSOU, 2017a, p. 1).

The purpose of this study is to ascertain, via one of the most widely accepted training and evaluation models in use by the industry today (Kirkpatrick Model), whether JSOU is meeting its mission of preparing SOF to achieve USSOCOM objectives (Ho, Arendt, Zheng, & Hanisch, 2016).

JSOU is the educational arm of USSOCOM. USSOCOM is a unified command comprised of SOF from all for military branches (Army, Navy, Air Force and Marines) within the DOD. The command has approximately 70,000 assigned personnel across the globe. USSOCOM's mission statement is "USSOCOM develops and employs fully capable SOF to conduct global special operations and activities as part of the joint force to support persistent, networked and distributed combatant command operations and campaigns against state and non-state actors to protect and advance U.S. policies and objectives" (USSOCOM, 2019).

JSOU, as part of USSOCOM, is tasked with providing joint SOF education to the DOD. The 2010 Initial Capabilities Document signed by then-Deputy Commander of USSOCOM Lieutenant General Kearney states the following:

> "JSOU provides joint special operations education, selective training and professional development that are essential to enhancing human

> performance or increasing special operations capabilities but are not provided by other institutions or available in other programs. JSOU curricula and programs support a life-long learning philosophy that provides an array of learning opportunities throughout a career. These must be both readily accessible and specifically tailored to the individual's needs at a point in time. This can be achieved by the following: a broad recognition of the value of investing in education; relevant education supported by a faculty with academic *and* operational/strategic credentials; JSOU should be the premier engagement tool for education: interagency (IA), international SOF, General Purpose Forces (GPF), and support to Service/joint professional military education (JPME); fill gaps in SOF education (Late-To-Need); leverage existing learning opportunities; accessible education; expand access to JSOU educators, publications and symposiums; delivered in classroom/seminar preferred but distance learning supported; and JSOU should consist of a MacDill main campus with satellite locations. Lifelong learning–senior SOF operators should have advanced degrees as a result of a deliberate progression of military and civilian education and a vehicle for college credit" (USSOCOM Staff, 2010, p. 2).

JSOU is organized into three teaching departments, each with a specific focus to achieve its organizational mission of providing SOF-unique courses of instruction found nowhere else within the DOD. The first department is the Center for Continuing

Education (CCE), which is tasked with providing courses that are usually no more than 10 business days in length and provide individuals with skills to enhance their specific areas of expertise. For example, one course prepares SOF personnel to work in a joint operations center as mission planners. In contrast, another course orients personnel newly assigned to the headquarters of USSOCOM on the roles and functions of the various directorates within the command and how he or she will execute various staff functions. Also, CCE exports many of its courses to SOF units assigned to geographic combatant commands (GCCs) and provides courses tailored specifically to the GCC's needs or traditional courses that JSOU offers, such as the SOF Non-standard Logistics Course. In the AY 2017, CCE taught more than 8,000 students in 169 iterations of 39 different courses in multiple locations in every GCC (JSOU, 2017a, p. 22).

The second teaching department at JSOU is the Joint Special Operations University – Enlisted Academy (JSOU-EA), with its educational focus being the PME of SOF enlisted personnel in paygrades E6 through E9. The nomenclature for the enlisted ranks varies by Service; for example, a Navy master chief petty officer is the same E9 paygrade as an Air Force chief master sergeant. Therefore, the author will refer to enlisted member positions by their paygrade structure, which is standardized among all of the Armed Forces. There are nine paygrades beginning with E1, which is the most junior member of the enlisted force, to E9, which is the most senior paygrade within the enlisted force. JSOU developed the Career Education Program (CEP) for SOF enlisted noncommissioned officers (NCOs), which tailors the curriculum based upon the level of responsibility the individual is expected to master for his or her current paygrade. The program also takes into consideration the uniqueness of SOF assignments. In SOF, a

Service member is often working in an assignment where small units operate autonomously with little to no formal guidance from a traditional DOD-style hierarchical organization. To meet the expectations being placed on enlisted members, the CEP was designed to provide the knowledge, skills and abilities to joint SOF enlisted across a spectrum of PME.

The CEP was designed to capture enlisted NCOs relatively early in their leadership careers while also providing courses for top senior enlisted leaders who have been selected for command positions that advise senior officers in commands from the group level (colonel) to the major command level (four-star flag officer). The courses that make up the CEP include the Career Education Program 1 (CEP1), designed for E6 paygrades; Career Education Program 2 (CEP2), designed for E7 paygrades; Career Education Program 3 (CEP3), designed for E8 paygrades nominated by their command for potential advancement to E9; and Career Education Program 4 (CEP4), designed for E9 paygrades who will be advising senior officers at the senior command level. In the AY 2017, the Joint Special Operations Forces Senior Enlisted Academy (JSOFSEA) taught more than 1,000 students in the four CEP courses during multiple iterations (JSOU, 2017a, p. 21). All of the CEP courses have been evaluated by regionally accredited civilian universities hailing from multiple accrediting bodies via their nontraditional learning authorities. These regionally accredited institutions awarded the CEP courses college credit equivalency at both the undergraduate and graduate levels for specific degree programs offered at their universities.

The third teaching department at JSOU is the College of Special Operations (CSO). This department delivers courses at the graduate and undergraduate levels,

focusing on SOF-unique areas such as countering weapons of mass destruction and the theory of special operations. It is the newest department of the three, having been established in 2015. CSO courses are usually longer in duration than the courses offered by CCE, often have an extensive out-of-class reading list with required discussion posts and are usually offered in a hybrid format (partially delivered online via Blackboard and the rest in residence). The courses also have a more extensive student assessment requirement, such as a research paper serving as a summative assessment. CSO courses are open to both officer and enlisted personnel along with DOD affiliated civilians, unlike JSOU-EA whose courses are only for specific enlisted paygrades. CSO also places a heavier emphasis on ensuring faculty credentials are equivalent to what one would expect from a regionally accredited institution of higher learning. In AY 2017, CSO taught 694 students in 47 iterations (JSOU, 2017a, p. 21). Additionally, CSO is where JSOU's senior fellows reside. The senior fellows are involved primarily in academic research of interest to USSOCOM and publish numerous SOF-focused monographs annually for the SOF community.

The other department within JSOU is the Academic Affairs department. It ensures JSOU courses maintain academic rigor by enforcing academic standards and a robust curriculum review process along with providing various student services. The department contains curriculum specialists, registrars, student services support persons, faculty development specialist and institutional effectiveness analysts. The departments also offer academic counseling for JSOU students wishing to enroll in voluntary education degree programs with partner colleges and universities. Academic Affairs does not offer any formal courses and is not evaluated using the Kirkpatrick Model.

The Research Site

The research site is JSOU, which is charged with educating the SOF throughout USSOCOM. JSOU is tasked with designing curricula for a changing global environment that meets the needs of military, international and interagency organizations. The JSOU's faculty and staff are committed to providing and maintaining the highest academic standards and continue to deliver a quality product to the SOF community. JSOU's vision, as stated on its homepage, is the following:

> A globally recognized academic institution of higher learning dedicated to enhancing special operations knowledge and its application. The vision is achieved by maintaining high academic standards, delivering high-quality and relevant instruction, when and where needed, retaining a highly credentialed faculty proficient in multiple teaching methods and by rapidly adapting to a changing global environment. The result is a career-long framework of joint SOF education that, when combined with Service-provided educational opportunities, significantly improves the intellectual competence of the force to successfully perform current and future special operations missions (USSOCOM, 2018c, p. 9).

To accomplish its mission, JSOU has a diverse mix of faculty and staff consisting of both full-time and part-time contract employees; DOD civil service employees; guest lecturers from academia, government and private industries; and active duty and reserve military members. This diverse mix gives JSOU the flexibility needed to attain subject matter experts (SMEs) quickly, thus ensuring JSOU's courses

remain relevant to the rapidly changing national security environment. All faculty members are instructor trained following faculty development guidelines and have been certified in the areas they teach (JSOU, 2017a).

Background, Context and Theoretical Framework of the Study

The expectation of this applied research study is to provide feedback to JSOU leadership and its parent organization (USSOCOM), thus possibly enabling leadership to determine whether JSOU is meeting the needs of the SOF enterprise in providing courses of instruction through the application of the Kirkpatrick Model. The Kirkpatrick Model of evaluating courses of instruction at four different levels (reaction, learning, behavior and results) was the method used to determine if JSOU was meeting its vision of being the "first choice for special operations education and knowledge throughout the world" as stated in the JSOU Factbook (2017, p.8). The 2010 Initial Capabilities Document approved by the then deputy commander of USSOCOM states the following:

> As the SOF mission evolves in scope and complexity, JSOU must support the various learning requirements that encompass this mission. JSOU's organizational structure must evolve to support the student in a variety of locations and situations. Understanding of education technology applications that increase human performance must be a fundamental part of JSOU's core capability and foster a life-long learning concept. Curricula development must be rapid and responsive to the needs of the force while assuring relevance and quality are always assured. Faculty expertise must expand beyond the operational and include educational credentials, as well as functional specialties

not traditionally associated with SOF. (USSOCOM Staff, 2010, p. 3).

Only through consistent, timely and relative feedback and evaluation can JSOU adapt to the deputy commander's guidance for a rapid and responsive curriculum that meets the needs of the command in a continuously evolving defense environment. The Kirkpatrick Model is one way to provide feedback to the organization. JSOU's 2006 strategic plan is an example where JSOU leadership acknowledged USSOCOM's post-9/11 shifting operational priorities and called for the reexamination of its role in joint SOF education. This review, in part, led to the creation of JSOFSEA. In the following years, JSOU leadership has acknowledged that its operating environment has shifted.

Consequently, in 2016, JSOU reorganized the university to provide courses that were more focused on critical thinking by establishing CSO (JSOU, 2016). However, until the summer of 2017, JSOU was operating with a partially effective version of the Kirkpatrick Model to aid in the decision-making that led to these critical strategic shifts. JSOU was only using Kirkpatrick Level 1 reaction surveys and assessment reviews (learning) via its curriculum review process. The other two higher levels of review were not being accomplished for myriad reasons, including difficulty in attaining the USSOCOM's Information Technology (J6) directorate's approval to conduct electronic surveys (Edwards, 2018).

Failure to complete all aspects of the Kirkpatrick Model is not uncommon. In a 2009 survey conducted by *Chief Learning Officer Magazine,* 92% of respondents said they measure Level 1 of the model, at a minimum. Nevertheless, the use of the model drops off dramatically with each subsequent level. This tendency suggests that managers may not fully grasp how the model should be used (Association for Talent Development

(ATD) staff, 2009).

This incorporation of all four levels of evaluation, as championed by Dr. Kirkpatrick, is the basis for evaluating JSOU's education offerings. Determining the value of JSOU's education to USSOCOM is a nebulous concept that leadership will have to decide with as much art as science in deciding whether the investment of time, manpower and money is worth the return or whether those resources would be better utilized elsewhere. The Kirkpatrick Model gives leadership an industry-standard framework to use to make a more informed decision on the value of JSOU's education for the SOF enterprise. Organizations that use evaluation to gauge the effectiveness of their learning programs, whether the program is training or education, are more likely to view their efforts as successful and to target their education and training efforts to objectives that align with the organization's primary business or mission objectives. It is also vital for those within an organization tasked with employee training and education to make sure learning positively influences employee behavior and to recommend and demonstrate the value of that learning to other employees within the organization. These positive outcomes of favorable reviews by employees of their training are secondary to the primary objective of aligning organizational needs with organizational learning. Organizations that do this tend to see positive results in their market performance (Phillips & Phillips, 2017).

Statement of the Problem

Because JSOU relies heavily on Level 1 surveys to ascertain the effectiveness of its mission, a gap exists in how JSOU and USSOCOM leadership evaluate the effectiveness of the provided training and education. Ultimately, the success of any

organization is dependent on the people within that organization. USSOCOM's first SOF truth emphasizes that its people are of more value than the hardware they use. These highly skilled professionals with years of specialized training cannot be quickly mass-produced during times of national emergency. The USSOCOM website states the following: "People, not equipment, makes the critical difference. The right people, highly trained and working as a team, will accomplish the mission with the equipment available. On the other hand, the best equipment in the world cannot compensate for the lack of the right people" (USSOCOM, 2018a).

SOF personnel are provided by their parent Service (Army, Navy, Marines or Air Force) and have obtained an abundance of training related to their specific Service operational specialty code. These types of skills are readily assessed while in training and then reassessed regularly through various military training exercises, check rides (flying evaluation of aircrew) and so on. Feedback is timely and relevant for SOF leadership, thus enabling leadership to modify or alter the training as conditions warrant. The type of skills JSOU courses teach are "soft" or as Bloom's Taxonomy of Learning Domains calls them cognitive in nature and do not lend themselves to the types of assessment that the military traditionally uses for an occupational skill where a psychomotor skill as defined by Bloom's would be measured such as a marksman qualification or engine repair (Bolin, 2005). This is where proper utilization of a robust review of the Kirkpatrick Model can be used to fill that gap.

Though initially designed for evaluating training programs, the Kirkpatrick Model can be readily adapted to higher education, thus providing stakeholders vital information to better assess the value of the education provided. The adaptation of the Kirkpatrick

Model in higher education helps to not only clarify criteria for what should be taught but also the assessment of what is being taught concerning desired educational outcomes. The Kirkpatrick Model can provide multilevel feedback from students and their employers to the education community on the effectiveness of their education efforts. The importance of such feedback is vital to the reality of stakeholder pressures and in the theoretical understanding of colleges and universities as open systems within the Katz and Kahn theory of open systems (Praslova, 2010). Romiszowski states, "Where exactly to draw the line between training and education in this education continuum is not clear. However, perhaps it is also not important. Perhaps it is more important to realize that most teaching/learning situations contain some continuum of each" (Romiszowski, 2016, p. 3).

Purpose of the Study

By determining if there is a correlation between Kirkpatrick's levels of evaluation, this applied research could potentially aid SOF leadership in their evaluation of the effectiveness of JSOU courses. If a correlation exists, it could be a factor in determining which programs or courses JSOU offers for the SOF enterprise are having an impact on SOF operations and whether or not modifications to, or deletion of, any of JSOU's current course offerings needs to be considered. It was not the intent of this study to determine the actual value of JSOU's courses to the SOF leadership but rather to provide information that could aid SOF leadership in making that determination. Implementation of this study's findings will provide USSOCOM's leadership insight into the development of SOF-unique education for the SOF enterprise.

Research Questions

The purpose of this applied research study is to aid JSOU leadership in determining whether all four levels of the Kirkpatrick Model could aid USSOCOM and JSOU leadership in developing curricula that will enhance SOF enablers' and operators' abilities to provide meaningful contributions to the mission of their organizations. This research examines the Kirkpatrick Model when used in its entirety vice only partially to ascertain if there is any correlation between Kirkpatrick's levels of evaluation that could assist JSOU leadership in making assessments as to the effectiveness of JSOU courses in meeting the stated course objectives.

Research Question 1: To what extent is there a correlation between the Level 1 (reaction) survey results and the Level 3 (behavior) survey results?

Research Question 2: By applying all four levels of the Kirkpatrick Model utilizing a mixed-methods approach, does the evidence show that JSOU is meeting the needs of USSOCOM as envisioned by USSOCOM leadership?

Rationale, Relevance and Significance of the Study

This case study examines the effectiveness of JSOU's mission of educating the SOF enterprise and can aid JSOU and USSOCOM leadership in determining if JSOU is meeting the needs of USSOCOM. Since 9/11, USSOCOM has been at the forefront of the Global War on Terrorism, providing SOF to the GCCs to prosecute the fight against terrorist activities in multiple theaters while still maintaining its readiness to work with conventional forces in fighting more traditional nation-state versus nation-state type wars. The education and development of SOF personnel are vital to the war effort and are a major concern for USSOCOM leaders, as evidenced in their emphasis on providing an

ever-increasing amount of Congressionally designated SOF (MFP-11) funds for JSOU's operations. Senior leaders rely on the skills of SOF personnel to conduct strategic and operational and tactical operations within not only the DOD but the whole of the U.S. Government to keep the brushfire conflicts of terrorism in hotspots such as Syria and Niger from turning into full-scale, major theater wars. The battlefield has become increasingly more complicated with the use of smart technology, social media and the enemy's ability to share lessons learned from the conflict in nanoseconds over the internet. To counter the opposition in this asymmetric style of warfare where the enemy avoids a traditional force-on-force engagement, SOF must rely on the critical thinking and problem-solving skills taught at schools such as JSOU to defeat opposing forces.

Rationale

Research on the effectiveness of JSOU's SOF-unique courses of instruction is vital to USSOCOM's role in providing combat-ready SOF to the GCCs and the DOD. It is critical to the national security strategy that USSOCOM, which has become increasingly relied upon by national leaders as the force of choice in prosecuting the Global War on Terrorism, provides the most capable forces possible. Since 9/11, USSOCOM has doubled in size from roughly 33,000 personnel to over 70,000 deployed to 144 countries in 2017 (South, 2018).

USSOCOM is increasingly relied upon under the Trump administration's revised national defense strategy in clashes of national will short of armed conflict that Secretary Mattis calls the "contact lair." A key role for USSOCOM in this revised national strategy will be in supporting the building of relationships with partner nations and reducing the enemy's influence. This can only be done effectively if the nation has SOF capable of

not only inflicting horrific damage to an enemy force, thus breaking the enemy's will, but also cultivating relationships and forging alliances with allies and partners of convenience as the situation dictates to prevent ~~a~~ war. Education provided by JSOU is critical to this effort of not just knowing how to apply whatever strategy is selected but also whom to apply it to and why (Mattis, 2018).

Relevance

Secretary Mattis stated in his 2018 National Defense Strategy that "we will emphasize intellectual leadership and military professionalism in the art and science of warfighting, deepening our knowledge of history while embracing new technology and techniques to counter competitors. PME will emphasize the independence of action in warfighting concepts to lessen the impact of degraded/lost communications in combat. PME is to be used as a strategic asset to build trust and interoperability across the Joint Forces and with allied and partner forces" (Mattis, 2018, p. 8). JSOU also must do its part as an education system within the larger DOD education system to prepare SOF to meet the expectations of being the best-led and best-educated force in the world.

Educational courses for SOF must maintain pace with the increasing demands placed on the SOF community. Senior decision-makers rely on the skills of the SOF community to conduct tactical operations with strategic implications on an almost daily basis, as evidenced by SOF's multiple engagements around the globe. The demands placed on SOF are constantly in a state of flux due to the fluidity of the Global War on Terrorism and the increasing threat from other nation-states such as China, North Korea, Iran and Russia in a multi-domain world. The SOF enterprise must be prepared intellectually to meet those challenges.

The Significance of the Study

The intent of this research study is to provide USSOCOM, JSOU leadership, and the SOF enterprise additional research and feedback on the impact the JSOU is making to improve SOF's ability to carry out its worldwide missions. The research evaluates how full implementation of the Kirkpatrick Model can provide leadership with relevant information that aids in making critical resource decisions concerning how JSOU is organized and funded and how it conducts its mission of providing SOF-unique courses of instruction. Does JSOU, as Lieutenant General Kearney approved in JSOU's Initial Capabilities Document of 2010, provide "joint special operations education, selective training and professional development that are essential to enhancing human performance or increasing special operations capabilities, but are not provided by other institutions or available in other programs" (USSOCOM Staff, 2010, p. 1)? JSOU was founded on the premise of filling the gaps in SOF Servicemembers' education by providing those SOF-unique courses of instruction not found elsewhere within the DOD education system. Does the Kirkpatrick Model aid JSOU and SOF leadership in answering the question of whether JSOU is fulfilling its role as envisioned in JSOU's Initial Capabilities Document of 2010?

Nature of the Study

This case study of JSOU's usage of the Kirkpatrick Model to evaluate the effectiveness of its mission to educate SOF at the operational and strategic level of war on special operations is a valuable tool. It will provide JSOU and USSOCOM leadership with relevant information suitable for aiding them in making strategic resource decisions such as manning, the focus of efforts, funding, and curriculum revisions. The author

utilized quantitative and qualitative data collected from JSOU students, their supervisors and SOF leaders via JSOU's already established Kirkpatrick Model-based Level 1, 3 and 4 surveys; questionnaires and interviews. The study took place over a six-month period, which allowed time for JSOU's survey data to be collected, reviewed and analyzed. The results were analyzed via a mixed-methods approach to determine if the Kirkpatrick Model is meeting the needs of JSOU and USSOCOM in documenting the impact JSOU's programs have on the SOF enterprise. As mentioned previously, the study addresses the question of whether a correlation exists between Kirkpatrick's Level 1 reaction survey and Kirkpatrick's Level 3 behavior survey to determine if JSOU leadership could draw inferences by way of correlation between the various levels of the Kirkpatrick Model.

Definition of Terms

Several terms are important to this study. As such, the following terms are defined.

Career Education Program (CEP): This is a program developed by JSOU to educate the "joint special operations forces enlisted leaders across a professional military academic continuum, providing the knowledge to think critically and lead successfully in current and future operating environments" as defined in JSOU's online 2017 Course Catalog (USSOCOM, 2018c).

Geographic Combatant Command (GCC): This is a joint four-star level military command with a designated area of responsibility. For example, EUCOM stands for United States European Command and PACOM for the United States Pacific Command (DOD, 2018b).

Noncommissioned Officer (NCO): A noncommissioned officer (NCO, colloquially *non-com,* or *noncom*) is a military officer who has not earned a commission (Oxford, 2018).

Professional Military Education (PME): This is "the systematic acquisition of theoretical and applied knowledge of the profession of arms" (Richard & Donninni, 1991, p. 2).

Special Operations Forces (SOF): SOF are the elite military units of USSOCOM such as Green Berets; Navy SEALs; and Air Force special tactics that organized, equipped, and trained to perform nontraditional missions in support of national security (Graf, Harrell, Kirby, McCombs, & Askew, 1999).

Theater Special Operations Command (TSOC): This is a sub-unified command of USSOCOM under the operational control of the geographic combatant commander. Its primary responsibility is to exercise operational control over theater assigned or allocated Air Force, Army, Marine or Navy SOF conducting operations, exercises and theater security cooperation within the geographic area of responsibility (USSOCOM, 2018b).

United States Special Operations Command (USSOCOM): This is the unified combatant command responsible for overseeing special operations component commands of the United States Armed Forces (DOD, 2018a).

Assumptions, Limitations and Delimitations

Assumptions

An assumption that was made in this study is that participants set aside any biases for or against the courses offered at JSOU while participating in the applied research

study. Participants were informed by JSOU that any personally identifying information they provided was confidential. Another assumption was that the survey instruments, questionnaires and interviews used by JSOU for its Level 1, 3 and 4 surveys were reliable for basing the outcome of this analysis of the Kirkpatrick Model. The survey instrument used by JSOU was reviewed and tested by DOD research analysts. Surveys were reviewed for appropriateness, validity, grammar and other research protocols. The DOD field testers were selected based on their expertise in the subject area, curriculum development and research methodologies and analysis.

Limitations

Potential limitations within this study may be reflected in the author having only a limited background in conducting research. The author has taken the required courses in research methodology for his degree program and worked with a certified operations research systems analyst to gain additional knowledge on research methodologies and analysis. Another potential limitation is the author's special operations background is dated, having not served as a uniformed member in the SOF community since 2010. Finally, data for individuals who completed courses at JSOU that have not yet had Level 3 and 4 surveys developed for those courses have not been included in the study. Resource constraints and limited time make the attainment of this additional data not feasible for this case study.

Delimitations

Delimitations in the study include individuals who have completed a JSOU course within three months of this study since these individuals or their supervisors will not have received a survey from JSOU in accordance with the university's policy.

JSOU's survey policy is in accordance with the Kirkpatrick Model which suggests at least three months should pass before surveying graduates on changes in work behavior or productivity. Additionally, individuals who have completed other PME programs that may have similar outcomes will not be included in the study. The study will be limited to JSOU sponsored courses.

Organization of the Remainder of the Study

The remainder of the study is organized in such a way that the reader can follow the research in this case study logically per Valdosta State University's suggested norms. JSOU's mission and history will be expounded upon in Chapter 2, along with a rationale for why a training evaluation model can be applied to an educational institution, a definition of terms, and the methodology for which the case study was organized, designed and analysis of data collected within the case study. The estimated timeline for this applied research study was six months from the approval date of the dissertation period.

Chapter 2 includes a literature review that examines literature and research studies that will aid the reader in better understanding the environment within which JSOU operates. The chapter is divided into sections that include an overview of PME; a more in-depth history of JSOU; systems theory (specifically adaptive and open systems); Kirkpatrick's four levels of training evaluation; a review of the Phillips ROI Model which is the other most commonly used training evaluation model; and lastly a review of JSOU's articulation agreements with regionally-accredited courses

Chapter 3 includes the methods used to analyze the relationship between three of

Kirkpatrick's levels of evaluation. The analysis is of the survey and questionnaire data already collected by JSOU at Kirkpatrick's Levels 1, 3 and 4 and a strategic vision review where JSOU conducted interviews of USSOCOM senior leaders. For its surveys, JSOU uses a Likert scale where respondents answer questions on a scale of one (lowest) to five (highest).

Chapter 4 includes both quantitative and qualitative analysis (mixed methods) and findings.

Chapter 5 includes a summary of the findings and recommendations for further studies regarding JSOU's utilization of the Kirkpatrick Model.

Chapter II

LITERATURE REVIEW

Professional Military Education

Carl Philipp Gottfried von Clausewitz was a Prussian military officer from the 19th century who wrote on military theory with his most influential work being the book "On War." Clausewitz's writings have had a profound impact on American military thought, and his works are studied throughout the American PME spectrum to this day, more than 100 years after his passing. Clausewitz wrote about military education, where he emphasized the need for a military education that prepared its leaders for the uncertainty of war.

"Each period, therefore, would have held its own theory of war even if the urge had always and universally existed to work things out on universal principles, it follows that the events of every age must be judged in the light of its own peculiarities. One cannot, therefore, understand and appreciate the commanders of the past until one has placed oneself in the situation of their times, not so much by painstakingly studying of all its details as by an accurate appreciation of its major determining features" (Kennedy & Neilson, 2002, p. 8).

Other military theorists have had as much if not more of an impact on the specific Service components of the United States military. There was Alfred Mayer Mahan who wrote on sea power and fundamentally shaped United States naval strategic thinking. The Air Force's Colonel John Warden developed a Five Rings

model that became the foundation for the decisive United States air campaign in the first Gulf War that crippled Saddam Hussein's military and civilian command and control infrastructure thus paving the way for a rapid and decisive ground war that lasted only 100 hours.

Every Service has military colleges dedicated to studying the art and science of war as expounded upon by these theorists and many others, each with their individual emphasis, whether it be on waging war using land power, airpower, etc. These Service colleges help the military better understand and prepare for the uncertainty of war from an educational perspective vice the typical basic military training, e.g., boot camp. Education gives one the tools to deal with the inherent uncertainties of war, whereas training focuses on using the tools and Soldiers, Sailors, Airmen and Marines of the military to wage war.

The Office of the Chairman Joint Chiefs of Staff of the United States Military states, "PME conveys the broad body of knowledge and develops the habits of mind essential to the military professional's expertise in the art and science of war" (DOD, 2015d). PME progresses throughout a Service member's career beginning with their initial indoctrination to the military to senior leadership. At the more junior levels, PME focuses on a tactical Service level and progresses along the continuum to joint warfighting while broadening the focus from the cockpit or foxhole to operational, and finally, strategic levels of war as described in joint doctrine. In the officer ranks, PME has five stages beginning with Service members pre-commissioning program, moving on to primary PME at grades O1-O3, then intermediate PME for grades O4 to senior PME for grades O5 and O6

culminating in the general/flag officer level. For the enlisted ranks, there is a similar progression beginning in the Service member's basic training which is defined as introductory for grades E1 to E3 progressing to primary for grades E4 to E6 then intermediate for grade E7, senior-level PME for grades E8 and E9 and lastly executive level for select E9s serving as the senior enlisted to general/flag officer level command (DOD, 2015d).

History of JSOU

General James Lindsey, the first commander of USSOCOM, recognized the need for joint military education tailored for the newly created USSOCOM just as the Services recognized the need for the study of airpower, sea power, etc., special operations needed a dedicated institution to focus on the study of special operations. The authority to conduct such courses was enshrined into law with the passage of the 1987 National Defense Authorization Act, which created USSOCOM and gave the commander of USSOCOM the authority to conduct SOF-unique courses of instruction to ensure SOF readiness. Admiral Crowe, the chairman of the Joint Chiefs of Staff at the time, also tasked General Lindsay with ensuring the conventional United States military forces were knowledgeable of the capabilities and limitations of SOF. Anna Waggener in her article in Joint Forces Quarterly describing the growth and greater emphasis DOD has placed on joint education since Congress's mandate that the Services invest more in joint military education states, "joint education is the foundation upon which our national and military security strategies are learned, understood, and initiated. To guarantee that our military stands ready to defend America against all threats and challenges" (Waggener, 2015, p. 59).

Initially, this effort at joint SOF education was made by tapping into the already existing United States Air Force Special Operations School (USAFSOS) located at Hurlburt Field, Florida by expanding USAFSOS's course offerings with more joint operational and planning-focused courses while also encouraging USAFSOS to recruit and enroll more SOF oriented students from the Navy and Army's special operations communities. The Marine Corps did not have any forces dedicated to USSOCOM at the initial founding of USSOCOM (USSOCOM, 2017).

USAFSOS, though, was still an Air Force Special Operations oriented school, and in 1997 General Peter Schoomaker the then commander of USSOCOM accepted the recommendations of the USSOCOM Future Concept Working Group tasked with creating SOF's vision for SOF 2020. The vision they created recommended USSOCOM establish a more definitive emphasis on joint SOF education and build an institution dedicated to that purpose. Out of this task force's recommendations and the multiple discussions and workshops that ensued at the headquarters in consultation with the SOF Service components came the concept of JSOU. The activation ceremony for JSOU was held at Hurlburt Field on 29 September 2000 (Maher, 2017). Initially, JSOU was housed in the same complex at Hurlburt Field that USAFSOS used. This coupling of JSOU and USAFSOS was done on purpose since JSOU was a fledgling organization with a small faculty and virtually no support staff. JSOU had to rely on USAFSOS for student services, classrooms and a host of other support functions. Over time though, as JSOU grew and its list of course offerings grew along with its student enrollment, USSOCOM leadership recognized the need for JSOU to have a dedicated building to host classes and the requisite support staff to keep the schoolhouse running behind the scenes. Early on in

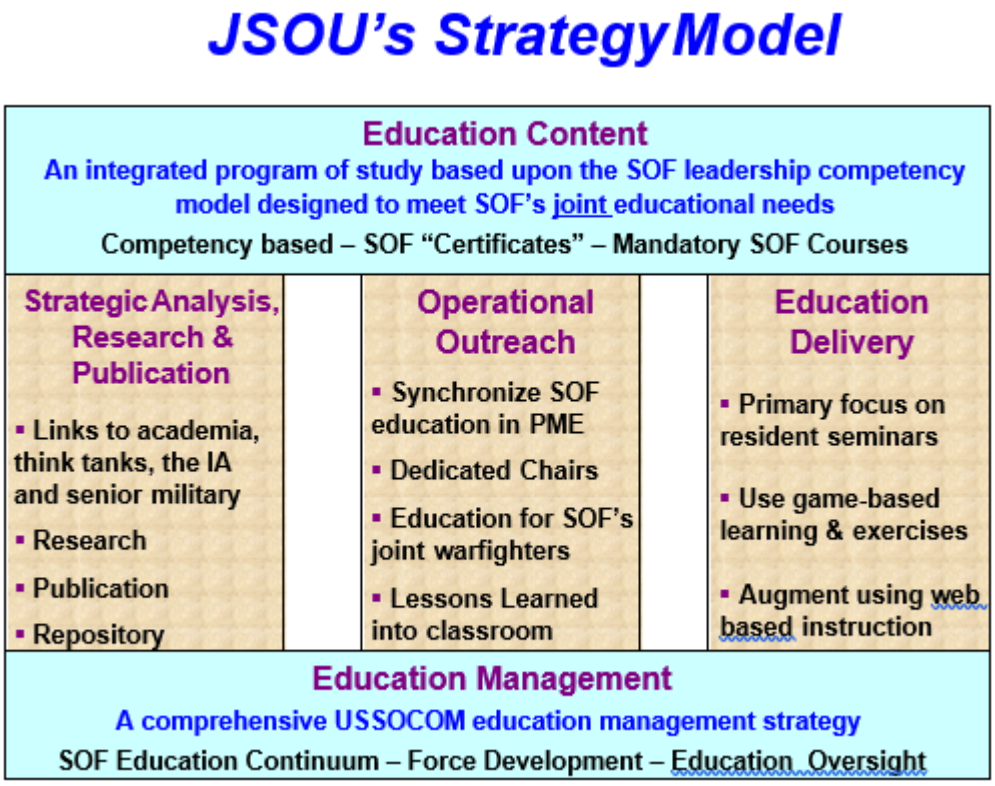
JSOU's history, though, there were those in the headquarters staff that opposed JSOU and believed the funding used for JSOU could be better utilized elsewhere. Only through the personal intervention of the USSOCOM commander did JSOU survive multiple attempts by headquarters staffers to eliminate JSOU's funding. JSOU's staff had to become experts, and fast, in working the halls of the USSOCOM headquarters to solidify JSOU's budget in long term budget planning known as the Program Objective Memorandum (Maher, 2017).

Not only did JSOU's small staff need to become budget experts, but they also needed to validate the educational requirements that were espoused in the original working group's findings of SOF 2020 that called for the establishment of JSOU. The validation for JSOU came in the way of anecdotal instances of praise from various unit commanders and SOF component flag officers that lauded JSOU's efforts in helping prepare their forces for the uncertainty of the post-9/11 operating environment. JSOU supported the war effort early on by quickly creating courses that were tailored to the needs of the forces preparing for deployment. JSOU did not just ask the students to come to the schoolhouse, but rather JSOU took the classes to the students by establishing a concept JSOU called mobile education teams (METs) of two to five faculty experts that traveled to where their students were located. These locales were at SOF Service component bases and the TSOCs that support geographic combatant commands. For example, European Command, which is responsible for the United States military interests and operation in the European theater.

In 2007, JSOU had a growing student enrollment that was surpassing USAFSOS's ability to support both its operations and JSOU's. That same year, a JSOU

study was completed on SOF education that concluded that JSOU was only partially meeting the demand for joint SOF education needed by the SOF enterprise. SOF had grown considerably since the attacks of 9/11, and the demand signal for JSOU's courses was beyond JSOU's current capacity. The education study recommended JSOU move to a dedicated facility at MacDill Air Force Base (AFB), Florida, where it would be collocated with the USSOCOM headquarters. The study also outlined JSOU's strategy model, and below is a chart depicting that model.

Table 1. *JSOU's Strategy Model* (JSOU, Factbook, 2007)



JSOU's faculty had taught more than 6200 students across the PME spectrum in 2007, with more than 3000 having enrolled in JSOU courses and the others having been in enrolled in other PME programs where JSOU provided subject matter expertise. In addition, 2007 was the first year that JSOU produced a factbook that reflected only

JSOU's accomplishments. Before this year, all of JSOU's factbooks were jointly written with USAFSOS, and student data was not readily delineable between the two schools (JSOU, 2007).

JSOU was now also collecting Kirkpatrick Level 1 surveys, also known as student reaction surveys, for its resident courses. The results of these Level 1 surveys were published in JSOU's annual factbook. The recommendation to build a separate facility and eventually move to MacDill AFB was approved by the commander of USSOCOM, General Bryan Brown. General Brown requested Congress to appropriate funds for military construction to build JSOU a new university at MacDill AFB, which were subsequently approved by Congress. By 2010, although funding had been approved, no new construction for JSOU had yet to be initiated. Admiral Eric Olson was now the commander of USSOCOM, and he directed JSOU to move from Hurlburt Field to leased facilities located just outside the main gate of MacDill AFB (Maher, 2017).

With the move in 2010 to MacDill AFB, JSOU was now independent of USAFSOS and responsible for providing student services, institutional effectiveness, admissions, etc. To provide these support services and keep pace with JSOU's increasing course offerings, JSOU grew from 58 to 112 full-time employees between 2007 and 2010. Student contact hours for students enrolled in JSOU courses, along with course offerings, increased. JSOU's overall student enrollment had not changed significantly, but the number of hours the student was actually in class learning had increased substantially from an average of 39 contact hours per student in 2007 to an average of 68 contact hours in 2010 (JSOU, 2010).

JSOU was increasing course offerings and student enrollment because the SOF

enterprise, specifically the headquarters, was continuing to ask for more SOF-specific education. The command had decided in 2007 that the traditional senior (NCO PME that was provided by the Service members' parent Service was not meeting the needs of the SOF enterprise. The commander of USSOCOM at the time, Admiral Olson, directed JSOU to establish a joint SOF enlisted academy (JSOFSEA) to provide more SOF-specific PME. What was once one NCO PME course offered four times a year had grown to four courses offered throughout the year to support the SOF NCO's PME throughout his or her career in SOF starting at paygrade E6 through the top NCO paygrade of E9.

By the summer of 2010, JSOU had completed the move into its leased facilities just outside the main gate of MacDill AFB. JSOU was operating as a separate organization no longer reliant on USAFSOS and had become a fully independent DOD schoolhouse complete with information technology (IT) support, admissions office, etc. With the move closer to the USSOCOM headquarters, demand for JSOU courses grew at a rapid rate. By 2014, JSOU had surpassed the 10,000student enrollment level, and new courses such as the USSOCOM Staff Education Program were being offered in direct support of the headquarters (JSOU, 2014). JSOU was utilizing Level 1 reaction surveys distributed at the end of each class to glean as much information possible from the surveys to improve its courses, but the school was struggling with implementing higher-level surveys because of the headquarters mandated IT security constraints. These constraints prevented JSOU from sending electronic follow-up surveys to recently graduated students and their supervisors. USSOCOM security and information experts expressed reluctance in allowing the follow-up surveys to be conducted based on security

and privacy concerns (Edwards, 2018).

In 2017, JSOU moved into a newly constructed facility specifically designed with education in mind located directly across the street from the headquarters complex of USSOCOM. The facility has classroom/seminar rooms, two auditoriums breakout rooms, and a state-of-the-art library. The 2017 JSOU Factbook states, "This world-class facility represents the significant commitment of USSOCOM to educate its force. This new building ensures the university is well on its way to becoming a preeminent 21st-century educational institution recognized as the center for joint special operations learning and research" (JSOU, 2017a, p. 26). A facility such as this clearly shows USSOCOM's commitment and investment in joint SOF education. The JSOU's president understands this commitment must compete with other USSOCOM priorities for resources and has called on JSOU's intuitional effectiveness office to invest more heavily in program assessment feedback to ensure this investment by USSOCOM in joint SOF education is returning the maximum value possible to the SOF enterprise (Edwards, 2018).

In 2018, JSOU had three teaching departments and one academic support department. There is the JOFSEA, which conducts four courses in multiple iterations annually known as the CEP. These courses target the SOF NCO corps paygrades E-6 through E-9 with military education specifically designed for the level of responsibility and complexity the SOF NCO will face in those pay grades. There is the CSO, which teaches courses at the graduate and undergraduate level focusing on SOF-specific issues and are open to all military both officer and enlisted plus civil service that support SOF operations. These courses are taught with the academic rigor of a traditional graduate or

undergraduate college. Many of the courses taught in CSO and JSOFSEA can transfer for a SOF member to a regionally accredited university for credit towards a degree via an articulation agreement that recognized the rigor of JSOU's educational course offerings since JSOU itself is not regionally accredited. The last of the teaching departments are the CCE, which, just as its name implies, teaches courses based on the continuing education model. The courses CCE teaches are often much shorter in duration, typically lasting only one to two weeks and are applied type courses that the Service member will use in his or her every day or deployed job. CCE annually has the greatest number of students and conducts the most course iterations. CCE's courses are open to both officers enlisted personnel affiliated with SOF along with civil service employees both within DOD and outside DOD in other government agencies that have a working relationship with SOF, such as the Department of State.

The table from JSOU's 2017 Factbook below shows the number of JSOU's students by category and the mean average of student contact hours per category.

Table 2. *JSOU 2017 Students and Contact Hours* (JSOU, 2017a)

	Number of Students				Student Contact Hours				Avg Hrs Per Student			
	AY14	AY15	AY16	AY17	AY14	AY15	AY16	AY17	AY14	AY15	AY16	AY17
RESIDENT	1,698	2,422	4,051	4,168	90,009	122,369	193,203	197,205	53	51	48	47
JSOU-EA	445	684	585	1,033	67,286	82,378	104,814	193,308	151	120	179	187
MET	1,694	1,689	576	313	79,520	61,661	20,053	12,400	47	37	35	40
DL	2,918	3,972	4,747	4,060	69,077	49,290	55,472	50,265	24	12	12	12
TOTAL	**6,755**	**8,767**	**9,959**	**9,574**	**305,892**	**315,698**	**373,542**	**453,178**	**45**	**36**	**38**	**47**
PME	4,450	3,510	4,263	3,507	17,347	14,092	15,589	11,612	4	4	4	3
TOTAL REACH	**11,205**	**12,277**	**14,222**	**13,081**	**323,239**	**329,790**	**389,131**	**464,790**	**24**	**27**	**27**	**36**

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As JSOU continued to grow in reputation and prestige within the PME community, the university applied joint PME standards as outlined in the chairman of the Joint Chiefs of Staff Officer Professional Military Education Policy. These standards enforce graduate-level regional accreditation type criteria on JSOU that include requirements for community and student feedback on the effectiveness of JSOU in meeting its stated educational objectives. (DOD, 2015a)

JSOU: An Open and Adaptive System

JSOU is no different from other educational institutions in that it is a system of interrelated parts working together to perform a specific function. That function, in this case, is the education of SOF. This primary function is directed by the USSOCOM commander under Title 10 authority to conduct SOF-unique courses of instruction and the education of the rest of the DOD on the roles and limitations of SOF as directed by Admiral Crowe at USSOCOM's founding.

A.J. Romiszowski looks at organizations through the lens of systems theory, not unlike an engineer would look at a mechanical system. Romiszowski uses the example of a bicycle, which is a relatively simple system, yet one with interrelated parts such as the frame, the wheels, the bike chain, gears, etc. all organized in such a way as to achieve a specific function (Romiszowski, 2016). Fremont Kast and James Rosenzweig also look at an organizational system as something composed of interrelated components or subsystems. Their organizational system is comprised of a goals and values subsystem, a technical subsystem, a structural subsystem, a psychological subsystem, and lastly, a managerial subsystem (Kast & Rosenzweig, 1972).

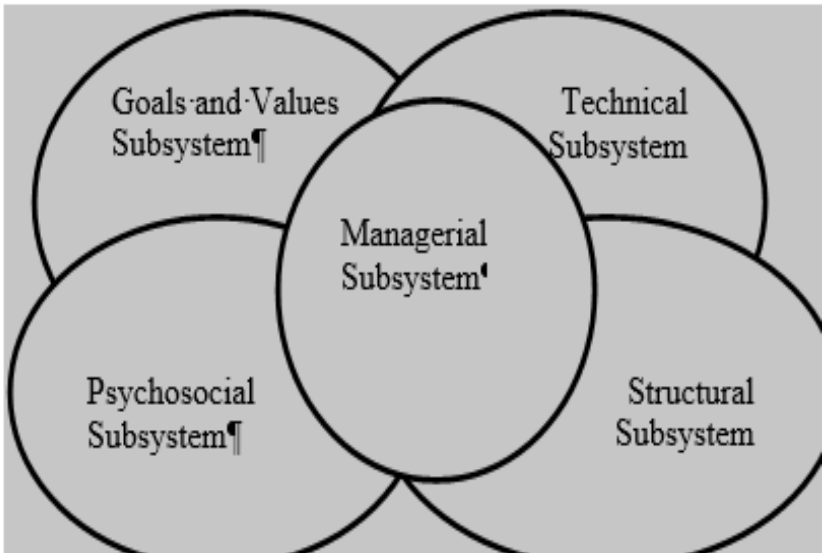


Figure 1. *System Theory Model* (Beach, 2011)

Where, though, does a system begin and end? In Romiszowski's bicycle example, one could argue the system ends with the mechanical part of the bicycle itself. Stopping there with the bicycle alone as a separate system would not take into account the need for the bicycle to have a rider pedaling the bicycle for the bicycle to actually perform the function it was designed for in the first place. An external input such as a rider is desired for the bicycle to perform the function it was built for. We could instead define the bicycle and the rider as one system where the interrelation between the rider is needed to balance and pedal the bicycle while in motion. Where a system begins and ends is dependent on what one is trying to describe. In the bicycle example, for instance, if you are looking at the system from a mechanical perspective, the bicycle ends with the bike itself and the rider who is not made up of mechanical parts is providing input into the system. Still, though, these inputs must be considered in the design of the bicycle, such as the rider's weight and his or her height, etc. A Tour De France race team might have a different perspective and consider the dynamics of the rider as an integral part of

the system and rather look at the road and its curves along with mountains as inputs to the system that affect the performance of the rider and mechanical system. Where one defines the boundaries of a system is dependent on what the researcher is trying to ascertain and will then define the system's boundaries accordingly (Romiszowski, 2016).

In the application of systems theory, Kast and Rosenzweig (1972) emphasize the researcher will need to be exacting in defining a system's boundaries and that organizational components are dependent upon the precise application of techniques in which the system's environment resides. From a social science perspective, the researcher must be aware of the social structures within a system and understand that they are as varied potentially as the individuals that make up an organization (Katz & Kahn, 1966).

Just as the bicycle system example of a subsystem bicycle wheel can be broken down into its rim, the rubber tire, the inner tube and the spokes, an organization can be broken down into multiple subsystems down to the individual level. One spoke on that wheel that is broken or out of alignment can affect not only the bicycle wheel subsystem but the bicycle itself and even the larger system that is a fusion of bicycle and rider. In the same way, one individual can affect his or her department or office within JSOU, which can then affect the school as a whole and even the SOF enterprise. JSOU is the educational arm of USSOCOM and interfaces with the entire spectrum of subsystems that are involved in defense of the United States and its allies.

If one is studying the education and training aspects of USSOCOM, then it makes sense to look at JSOU as not a subsystem but a system unto itself. JSOU is an open system with four elements:(a) inputs of energy, resources and information;

(b) process components or throughputs; and (c) outputs of energy and information with a fourth component (d) being a control mechanism which acts as a regulator of system output (Romiszowski, 2016). JSOU students and resources from USSOCOM are element (a) with the actual teaching of students being element (b) and lastly the education the students receive and the students returning to their employers and working are element (c). How, though, can the fourth element, (d) "the control mechanism," make an informed decision regarding JSOU and its desired throughput if that control mechanism (the leadership of USSOCOM) is not given the needed data to aid the decision-makers in making a decision? This need for data to make informed decisions is critical to JSOU's relevancy to the larger system it is a subsystem of the Kirkpatrick Model that JSOU utilizes must be validated for leadership to have confidence in the information they rely on to make resource decisions the university.

George Odiorne outlined some important concepts in constructing training programs in his book *A System Approach to Training*. Odiorne stipulates that training needs must first be identified, a curriculum developed to satisfy the training need and that there must be an evaluation to measure the effects of the training. This feedback can be either positive or negative and will lead to a modification of the system. This type of system is deemed an adaptive system if output will be modified based on either environmental factors (those factors beyond management's control) or feedback from students and their industries (Odiorne, 1970). The Kirkpatrick Model is one of the tools used by JSOU to obtain such feedback, thus enabling JSOU to be an adaptive system.

F. Betts' article on "How Systems Thinking Applies to Education" summarizes a school as an open system that frequently interacts with its environment and often

coordinates with other systems within the environment it operates. Betts' open school system is one that becomes a learning system taking feedback from its environment and adjusting to maintain the organization or alter the organization, if needed. It is a system that seeks new purposes and niches that seeks increased capacity for self-reference, self-correction., self-organization, and self-renewal (Betts, 1992). Using Betts' construct of a school as an open system, one can employ a systems theory approach to the evaluation of the training and education effectiveness of JSOU, as perceived by graduates and their supervisors.

Kirkpatrick's Levels of Evaluation

JSOU follows the Kirkpatrick Model, which includes four levels of evaluation. These areas include measuring changes in the following order with Level 1 being student reaction, which measures how those students receiving the training or education reacted to the course. In many ways, it is comparable to a customer satisfaction survey. Level 2 is measuring learning. Did learning occur? This level is often measured by requiring the students to present a case study, take a test or in some way demonstrate that they learned what the instructor intended for them to learn. Level 3 of Kirkpatrick's four levels is behavior. Did the student's behavior as it relates to what he or she learned change after attending the course? Another way of asking the question: Is the student applying on the job what he or she learned in the course? This level can sometimes be difficult to measure because even though the student may have reacted favorably and tested well, no behavior may be measured because the student has not had the opportunity to apply what he or she learned on the job for myriad reasons. If this is the case, then perhaps the training or education is not being taught to the target audience it was intended for. This is

something the employer also needs to know since the employer is expending resources for the education or training that, perhaps, could be better utilized elsewhere. The last and most difficult level of evaluating the effectiveness of training, according to Kirkpatrick, is changes in work performance. This is where organizations are looking for evidence that the training provided is resulting in the intended impact, thus answering the question of whether investing in the training is worth expending organizational resources. Sometimes, though, depending on the type of training the student received, it may be very difficult for a company to assess Level 4 results accurately and decisively. Some training programs have long-term goals in mind, such as diversity in the workforce or conflict resolution, etc. These types of programs with soft skills will instead rely on indicators from the evaluations of the other three levels of evaluation in order to build a case for results-oriented leadership (Kirkpatrick & Kirkpatrick, 2016, p. 25). The argument that all four levels are vital to evaluating the success of training is very compelling and covers almost every facet imaginable if one measured the value-added of a particular training program. "Kirkpatrick suggests a variety of evaluation instruments such as questionnaires, feedback forms, verbal/written reports, observation, tests, and interviews to collect evidence with data from each of four levels. The evidence then supports the training results, demonstrating the value of learning and reinforcement. The concept of the value of learning and training is referred to as the Return on Expectation (ROE) in the model" (Chang & Chen, 2014, p. 213).

Donald Kirkpatrick's original dissertation back in 1954 at the University of Wisconsin was titled "Evaluating Human Relations Programs for Industrial Foremen and Supervisors." Dr. Kirkpatrick developed a method to evaluate the effectiveness of the

University of Wisconsin's human relations training program for industrial supervisors. He did not originally label his evaluation theory as Levels 1 through 4, but the reader can clearly discern that Dr. Kirkpatrick makes the argument that in order to be an effective evaluation, one must evaluate the program from multiple points of view. Dr. Kirkpatrick proposes pre- and post-test assessments, student end of course surveys and follows up evaluations of trainees' performance on the job by their supervisors. Dr. Kirkpatrick's findings were a mixed bag of both overall praise for the training program and also findings of ineffective aspects of the training program that needed to be improved. This dissertation was the foundation for the Kirkpatrick Model taught by his son and daughter-in-law today and is widely accepted around the world as a relatively simple and constructive method to evaluate the effectiveness of corporate and government continuing education and training programs (Kirkpatrick, 1954).

Level 1: Reaction

JSOU relies heavily on Kirkpatrick's Level 1 evaluation, which is the participant's reaction to the training he or she has been given. Kirkpatrick states that evaluating reactions to training is much like measuring a customer's satisfaction level. If the trainee is going to be engaged and actively participate in his or her training, it is important that the trainee reacts favorably to the training being given. Motivation is not only important to facilitate the trainee's absorption of knowledge, but it also plays a factor in whether the trainee will tell others in the organization of his or her experiences in the training program. A negative reaction trend where the trainees tell coworkers or their supervisors of their negative experience can be the beginning of the end for a training program if those in charge of the training do not quickly and effectively deal

with the negative reports (Kirkpatrick & Kirkpatrick, 2016).

Level 1 evaluations are easy to quantify. Most students have taken college courses where the instructor appoints a student as the proctor, and the instructor leaves the room while the students fill out a survey regarding their class experience. The proctor collects the surveys, seals the envelope and returns the sealed envelope to the instructor, who then later turns them over to something akin to an institutional effectiveness office. The surveys are then scored and analyzed as part of a comprehensive review of not only the students' satisfaction with that particular instructor, but also the students' satisfaction with the learning environment provided by the university. The data is usually reliable in the sense that there is a large enough sample of the population being surveyed, e.g., an entire political science 101 class. In most instances, JSOU has close to a 100% return rate since the surveys are handed out and collected in class. At JSOU, the instructor usually hands out the surveys on the last day of class after the assessment has been given and before graduation. The surveys are anonymous and as stated earlier, almost always near a 100% return rate since the class is still in session.

In an increasingly competitive environment where universities must not only attract but also retain students, many universities have been adopting a "business-like" approach to the quest for student attraction and retention which is the measuring of "customer" (student) satisfaction. "In so doing, they effectively mirror the private sector's marketing practice by regularly measuring 'customer' satisfaction while some may find 'students as customers' potentially distracting others in higher education administrative roles have suggested that these student satisfaction surveys are also claimed to evaluate either the quality of teaching or the subject being delivered"

(Bedggood & Donovan, 2012, p. 285).

What, then, is being measured? What is the ultimate purpose of Level 1 student surveys? Are they capturing teaching quality or student satisfaction or potentially both? Does it depend on how the survey is worded? Customer satisfaction is an extremely vital aspect for businesses and something that is regularly measured in the private sector. As universities compete for tuition dollars or government funding, it is not surprising that they would focus on students much like a business focuses on its customers, and just as a business must regularly measure customer satisfaction, so must a university. Many universities, though, are describing these surveys as "teaching evaluation" surveys, yet, many scholars to include Kirkpatrick, argue that these student surveys are measures of student "satisfaction" rather than measures of teaching quality.

In a study conducted in Australia of eight universities, it was discovered that the end-of-course surveys are mostly ways to measure student satisfaction, vice measuring aspects relevant to student learning in higher education (a more appropriate measure of teaching quality). Research conducted by (Wiers-Jensen & Jens, 2002), found an overlap between student satisfactions and teaching evaluation surveys that may be caused by other factors such as class size, school amenities, etc., a study in 1999 of 8 Australian Universities. Bedggood and Pollard found that these surveys are misused tools that they lack reliability and validity (Bedggood & Pollard, 1999). Paul Ramsden, though, argues that given that few alternatives or until other more corresponding methods of evaluation are used by university managers to evaluate staff; then, by default, academics will be evaluated based partly on student satisfaction, using surveys that may produce invalid and unreliable data. As it stands, the use of student satisfaction to evaluate teaching

quality is common practice (Ramsden, 1991).

The preceding paragraph outlines some concerns with using a student end-of-course survey as the only measure of an instructor's performance, but there is still valuable insight to be gained. Perhaps, due in part to a lack of alternatives that are as easily obtained in evaluating a university's core product (education), school administrators rely heavily on student survey data. Collecting student feedback can be useful, but the key is in how the data are interpreted and applied. Using student feedback alone to make strategic changes to subjects, and to a lesser extent their delivery by the instructor could lead to poor decision-making if the data the administrator relied on was improperly collected or the survey was not sufficiently worded to capture the needed data germane to the questions at hand. Additional problems can emerge when low evaluation scores are attributed to poor teaching quality when other factors, such as a personality conflict between student and instructor or situational factors such as environmental or student motivation, could have produced the low scores. It is vital to analyze the data through the right contextual lens before relying on it for key administrative decision-making (Bedggood & Donovan, 2012).

Level 1 reaction surveys have their value, though, despite the concerns noted in the proceeding paragraphs. Kirkpatrick's claims of measuring student reactions to show value in a course were verified via a study of nursing students receiving teacher workshop training through pre- and post-training surveys of the students' perception of the training. The study showed a marked increase in student confidence to take on tasks related to their training after they had completed the workshop. The confidence regarding the tasks related to the students' training had more than doubled after taking the

workshop (Piryani, Dhungana, Piryani, & Sharma Neupane, 2018).

Kirkpatrick sums it up best in his book when he states there are two very solid reasons for conducting Level 1 reaction surveys of an organization's training programs. First and foremost, the students are the customers, whether they paid for the training or not. If the students do not leave the training satisfied, they will most certainly let their management know of their dissatisfaction with the training if asked, thus leading to management making decisions about the training accordingly. Second, if the students are not surveyed at the end of the class, you are in a sense stating their opinion is not needed and that you, the instructor, know all that you need to know about teaching and the subject you are tasked with teaching. You are, in essence, claiming the class is perfect as it is, and there is no room for possible improvement (KirkpatricK & Kirkpatrick, 2007).

JSOU's proclivity toward using Level 1 reaction surveys for measuring its corporate university performance is not uncommon. Research has "revealed that the Kirkpatrick levels of data most often collected when conducting training by the organizations surveyed fell into the first two categories of Levels 1 and 2: The American Society of Training and Development 2002 State-of-the-Industry Report, in an industry survey found that 78% of the benchmarking organizations surveyed reported using reaction measures, compared with 32%, 9%, and 7% for learning, behavioral, and results, respectively (Van Buren & Erskine, 2002). "The high prevalence of reaction measures is often explained by their ease of collection and their proximal nature. However, empirical research has had limited success in demonstrating a link between the first two measures proposed by Kirkpatrick and the last two, behaviour and results" (Morin & Renaud, 2004, p. 299). This study of JSOU's use of Kirkpatrick will attempt to discern if such a link

exists by conducting a regression analysis to confirm if there is a correlation between JSOU's Level 1 (reaction) surveys and JSOU's Level 3 (behavior) and Level 4 (results) surveys.

Level 2: Learning

Kirkpatrick states that there are three things an instructor can teach. They are knowledge, skills, and attitude. Measuring learning, therefore, requires an organization to determine "what knowledge was learned? What skills were developed or improved? What attitudes were changed?" (Kirkpatrick & Kirkpatrick, 2006, p. 42) Measuring the level of knowledge and skills learned and student attitude via Level 2 allows for determining the relevance and quality of the instruction provided and the suitability of the assessments and evaluation instruments used as part of the learning. The Public Health Foundation utilizes Kirkpatrick in its training and education and emphasizes that Level 2 evaluations are often conducted using pre- and post-training assessment; however, there are other approaches, including interviews, simulations, and on-the-job observations, group projects, performance-based activities, and game-based activities that can be undertaken with or without a pre- and post-test (Public Health Foundation, 2019).

Kirkpatrick recommends that Level 2 measures of learning, including a pre- and post-test, where instructors should endeavor to measure knowledge skills and attitude before the instruction to link results from the post-test to the program of instruction. Kirkpatrick also recommends, if possible, that a control group be used to better isolate the effect of the training program on the final results (Kirkpatrick & Kirkpatrick, 2006). Neither of these recommendations using a pre- and post-test or a control group is mandated at JSOU just as they are not mandated by the Public Health Foundation in their

evaluation matrix, but they are encouraged when time and resources make it feasible. Kirkpatrick's suggestion of using a control group or a pre- and post-test is just that a suggestion that gives the instructor a readily easy way to measure the level of learning that occurred that is directly attributable to the course of instruction.

The state of Connecticut has a train the trainer program that describes the Kirkpatrick Level 2 learning evaluation as the measurement of the increase in knowledge or intellectual capability from before to after the learning experience. This evaluation is usually conducted right at or near the end of the course. A passing score on the assessment is required. The type of assessment that is appropriate for the course along with a passing score needed for the student to receive credit for completing the course is determined during the course development process. Did the trainees learn what the instructor intended to teach? Did the trainee experience in the class what the trainers intended for them to experience? After completing training what is the extent of advancement in the trainees, in the direction or area that was intended? For a Level 2 assessment to be considered adequate, the assessment methods need to be closely related to the learning objectives for the course. Reliable and clear scoring and measurements need to be applied. Consistency in the application of the assessment needs to be paramount to provide reliable assessment data (Connecticiut, 2018).

The state of Connecticut's insistence that the assessment method needs to be closely related to the learning objectives for the course is not unlike JSOU's efforts to develop assessments that are appropriate for the course of instruction being assessed. JSOU develops the appropriate assessments during the curriculum development process. JSOU's curriculum development involves SMEs, instructional systems designers, and

assessment development experts. Also, JSOU conducts as many pilot courses as needed, and a mixture of SMEs and sample of students from the targeted audience take the course together, include taking the end of course assessment, and then offer critiques to the team developing the course. Once the instructor of record, along with his or her department chair, is satisfied that the course meets the desired outcomes, a multi-department review board convenes and reviews all pertinent data about the course. The review board makes recommendations to JSOU leadership as to whether the course is meeting its desired outcomes or needs to be modified to meet the targeted educational goals.

After the course has been initially approved, courses are then reviewed annually via an abbreviated curriculum review process to ensure academic standards are being maintained. This annual review involves the JSOU's department heads or their designated representatives, an assessment specialist, Institutional Effectiveness representatives and the instructor of record for the course. All processes are codified in JSOU's Operational Instruction 36-1 titled Curriculum Management. This thorough curriculum review process that includes an on-site Ph.D. curriculum specialist dedicated to ensuring the quality of the assessment aspect of the curriculum process. This entire process ensures JSOU is meeting Kirkpatrick's Level 2 intent of confirming knowledge skills and attitude are sufficiently measured and aligned with desired learning outcomes (Casey, 2018).

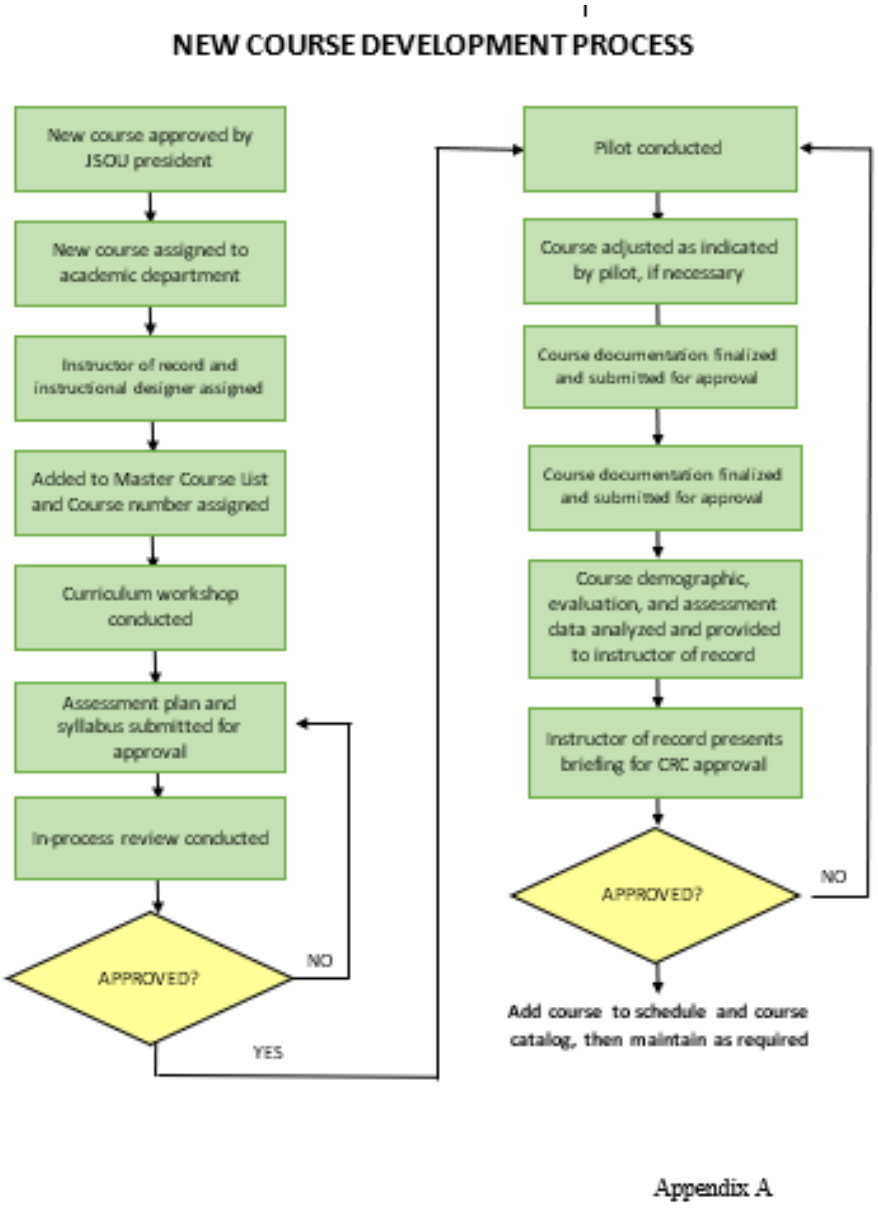
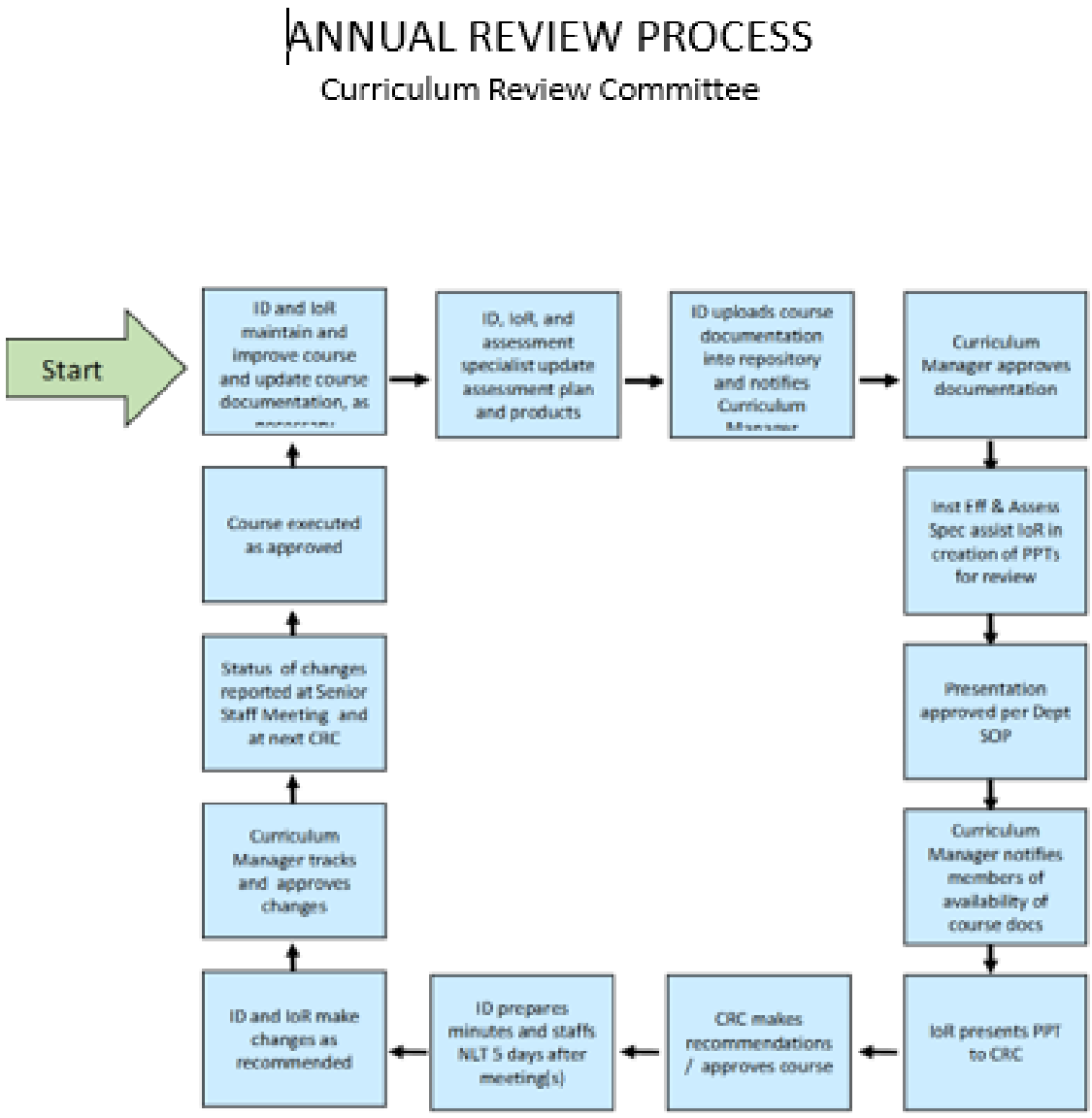


Figure 2. *New Course Development Process*



Appendix F

Figure 3. *Curriculum Review Committee Annual Review Process* (JSOU, 2017c)

Accreditation is another aid that JSOU uses to guarantee that the university is meeting academic standards. JSOU is accredited by the Accrediting Council on Continuing Education and Training (ACCET). ACCET is a national accrediting agency

that meets the United States Department of Education standards to accredit educational and training institutions up to the community college and vocational-technical school level. JSOU's last ACCET commission review was in December of 2014, at which time the university was granted a five-year accreditation by ACCET, which is the longest accreditation approval ACCET awards. ACCET's on-site visit for initial accreditation and every reaccreditation visit includes reviewing an institution's faculty credentials and curriculum development processes to include assessment. At JSOU's ACCET reviews, all assessments were deemed more than adequate for ACCET standards (Casey, 2018).

ACCET's accreditation standards specifically address accreditation using the term performance measurements. In standard VIII, under student assessment and achievement, ACCET states all institutions accredited by ACCET must ensure "performance measurements are written, periodically evaluated, and updated to ensure instructional effectiveness. The institution has a sound, written assessment system that contains a set of defined elements, such as grading scale, weighting factors, tests, quizzes, reports, projects, attendance, and participation, that are appropriately related to the performance objectives of the program or course. The institution clearly and effectively communicates the assessment system to students at orientation and the beginning of the course/program" (ACCET, 2018).

Lastly, some of JSOU's courses have been reviewed by regionally accredited universities for transfer credit equivalency. This academic equivalency has been codified via articulation agreements between JSOU and the partner schools. These partner schools have deemed the courses worthy of credit for JSOU students enrolling in degree programs that these schools offer. These JSOU partner schools must justify this college-

level equivalency to their regional accrediting bodies, and they do this by an in-depth review of JSOU's courses. This review includes evaluating the sufficiency of the end-of-course assessment in measuring the desired student outcomes for the course. This college-level equivalency credit that is given by the university's partner schools also speaks to the academic rigor and level of learning at JSOU, as demonstrated by the student end-of-course assessments (Calvilio, 2018).

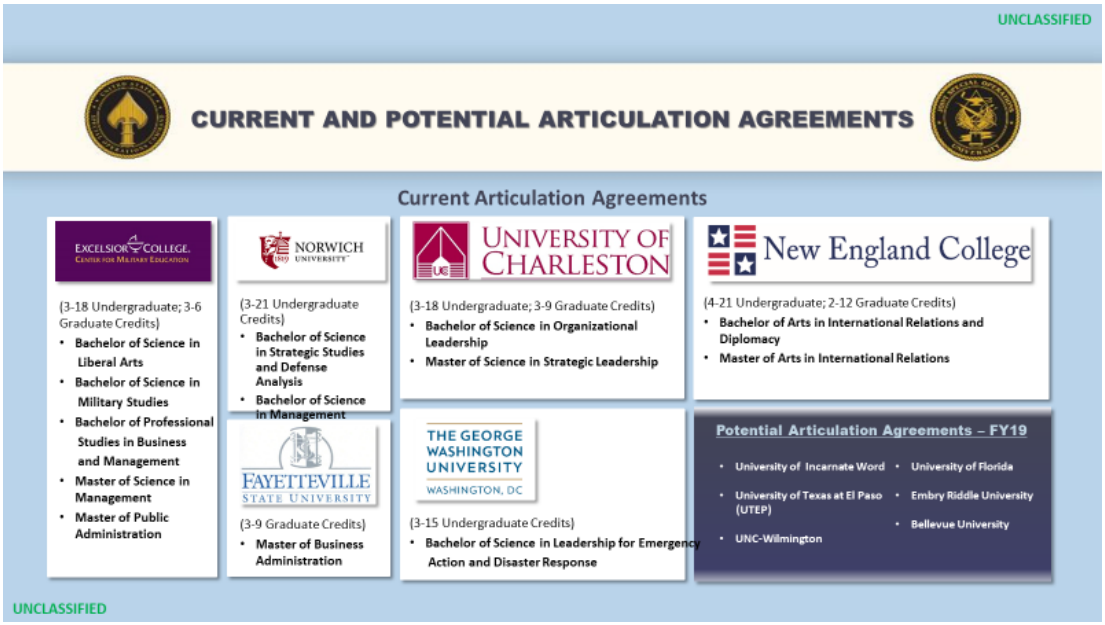


Figure 4. *JSOU Partner Schools* (Calvilio, 2018)

With JSOU's very deliberate and codified curriculum development and review process, JSOU's accreditation by ACCET, (see Appendix A) specifically those standards related to assessing student learning and its multiple articulation agreements with regionally accredited universities, it can be argued that JSOU is meeting Kirkpatrick's emphasis on Level 2. JSOU complies with Kirkpatrick's insistence that there must be adequate processes in place to measure a student's knowledge, skills and attitude at the end of a training or education course. There is room for improvement, though, since

JSOU's use of pre- and post-tests to measure gains in knowledge, skills and attitudes are limited to only a few of JSOU's course offerings. This suggestion of pre- and post-test usage is listed as a highly suggested guideline for evaluating learning by Kirkpatrick. (Kirkpatrick & Kirkpatrick, 2006).

Level 3: Behavior

The next step in the evaluation process is Level 3, measuring behavior on the job after having received the training or education. This level of evaluation attempts to determine if the students' behavior in the workplace has changed based on the training the students received. This level tries to answer the question as to whether the student is now trying to apply what they learned in training to their work. This does not necessarily mean the student is successfully applying that newly acquired knowledge, but if this type of evaluation is combined with the first two levels of evaluation, then one has now built a case where you can state that the individual reacted to the training positively, understood what he or she was being taught and is now applying that training in their work. If the training was properly designed with the intent of meeting a validated need, then it can be inferred through these three levels of evaluation without ever actually measuring the outcome (Level 4) that the training is having the desired effect. However, having a Level 4 evaluation of desired outcomes is still preferred (Kennedy, Chyung, Winiecki, & Brinkerhoff, 2014). This inference that Kennedy et al. are referring to is, in part, what this applied study is attempting to find out by determining if there is a correlation between Kirkpatrick's levels of evaluation.

Kirkpatrick describes Level 3 evaluation as determining the extent to which changes in on the job behavior occurs because of the training program received. No

positive results, though, can be expected unless some sort of positive change in behavior has occurred because of the training or education received. Kirkpatrick emphasized that if an educational or training entity is going to prove the value-added to the organization, then it must discern if the knowledge, skills and attitudes learned in the training or education program have transferred to the job site (Kirkpatrick & Kirkpatrick, 2006). For some, this level is as far as one needs to go to show the value of a new training or education program. If you can show that trainees are trying new procedures, implementing newly learned concepts or completing tasks in accordance with the training received, then an organization can declare that the training or education is successful in driving an organization forward in the direction desired by leadership. At this level of evaluation, it can be determined if resistance to implementing newly learned training or knowledge has been overcome, and sometimes that is enough to argue the success of the program being evaluated (Phillips P., Phillips, Paone, & Gaudet, 2019).

Kirkpatrick emphasizes that before changes in behavior can be identified, they need to be defined. Only then can the needed critical changes be identified to drive toward the goal of seeing an impact on Level 4 results. "Critical behaviors should be defined in terms that connect them to the outcome" (Kirkpatrick & Kirkpatrick, 2016, p. 52).

Level 3 can be measured both quantitatively and qualitatively depending on the type of measurement used. It depends on the organization and how it defines success. Organizations can use surveys, interviews, direct observation, key performance indicators, follow up meetings, etc. (Kirkpatrick & Kirkpatrick, Kirkpatrick's Four Levels of Training Evaluation, 2016). For this study, Level 3 is evaluated using surveys JSOU

has sent to students and their supervisors via email after receiving the training for the program being evaluated.

Level 4: Results

Level 4 is the pinnacle of Kirkpatrick's four levels of evaluation, where the training or education entity attempts to determine what the outcome is of the training or education to the organization.

Here, the school or chief learning officer asks questions such as how much did quality improve? Did productivity increase and if so, by how much? Was there a change in employee turnover based on the new management training? Are there determinable cost savings based on the new training regimen? Are employees more efficient in completing their tasks after taking the course? These are just a few of the types of results-focused questions that instructors attempt to answer to show value to the organization (Kirkpatrick & Kirkpatrick, 2006). These types of questions are also known as impact evaluation which examines "what extent long-term and sustained changes have occurred in the target population" (Boulmetis & Dutwin, 2005, p. 7) based on the training received. There is a shift in focus between Kirkpatrick's third and fourth levels of evaluation. The first three levels focus on the students or trainees from their reaction, learning and change in on the job behavior, whereas the final level shifts to organizational outcomes or results.

Kirkpatrick, Philips and Boulmetis all state that measuring impact is the most difficult to do and is often not done by trainers for a multitude of reasons. These reasons include employee turnover, not allowing sufficient time for the training to take hold and job or circumstances changed by the organization; thus, the newly acquired skill is no

longer needed, and lastly, too many resources are required to measure the results. This assertion is supported by the 2002 American Society for Training and Development (ASTD) survey cited earlier and Morrison and Mallin's 1996 survey of instructional systems designers. Morrison and Mallin's survey found that the respondents cited limited resources for conducting Level 3 and 4 evaluations as one of two main reasons for not conducting Level 3 and 4 evaluations. The second obstacle was a lack of upper management emphasis on conducting more in-depth evaluations (Moller & Mallin, 1996). In 2009, ASTD again surveyed its constituency as to what levels of evaluation were used in their organizations, and once again, there was a strong reliance on Level 1 reaction surveys. The results were that 91.6% measured at least Level 1, while only 36.9% measured all four levels, and 8.4% measured nothing at all when evaluating training (American Society for Training and Development (ASTD), 2009). The rationale as to why so few organizations measure all four levels are numerous, as stated earlier, with the most common response in a 2014 study being instructors lacked the time and resources to conduct more in-depth evaluations beyond Level 1 reactions. Other reasons cited included organizational leadership did not require it, resistance to over evaluation and lack of access to needed data (Kennedy, Chyung, Winiecki, & Brinkerhoff, 2014).

The Federal Government is moving forward with Kirkpatrick's Levels 3 and 4, though, despite the difficulty in evaluating training at the these levels through the Office of Personnel Management's (OPM) guidance to federal agencies which states "agencies are required to evaluate their training programs annually to determine how well such plans and programs contribute to mission accomplishment and meet organizational performance goals" (Office of Personnel Management, 2018).

OPM has based its training and evaluation guide on the Kirkpatrick Model. OPM's 2011 Federal Training and Evaluation guidance specifically states, "This field guide is based on the Kirkpatrick Four Levels" (Office of Personnel Management, 2011, p. 5). This guide also depicts an illustration of the Kirkpatrick Model to help trainers understand the differences in the four levels.

6

Figure 1. Kirkpatrick Four Levels™

Level 1: Reaction	To what degree participants react favorably to the learning event
Level 2: Learning	To what degree participants acquire the intended knowledge, skills, and attitudes based on their participation in the learning event
Level 3: Behavior	To what degree participants apply what they learned during training when they are back on the job
Level 4: Results	To what degree targeted outcomes occur, as a result of learning event(s) and subsequent reinforcement

Figure 5. *Kirkpatrick Four Levels* (Office of Personnel Management, 2011)

The 130-page OPM field guide has multiple case studies of various agencies usage of the Kirkpatrick Model with examples of surveys, pre- and post-test design hints, etc. and multiple suggestions on how to properly measure the various levels of evaluation using the Kirkpatrick Model. The OPM guide emphasizes that Kirkpatrick's Levels 1 and 2 measure whether an organization is providing effective training but do little in measuring the training's impact on the job. The OPM guide states:

> Training effectiveness is the application of what is learned on the job to yield measurable results that directly contribute to the

> accomplishment of the agency goals and ultimate mission. This contribution can be measured and reported to show the correlation of training to the accomplishment of the agency mission. This relates to Kirkpatrick Level 3 Behavior and Level 4 Results. The ultimate purpose of training is to bring about targeted agency results. Training evaluation provides the methodology and tools to make informed decisions to that end. The training industry worldwide tends to focus more on effective training than training effectiveness. This propensity has placed the training industry under great scrutiny, with organizations demanding to know what value training brings to the ultimate mission. Training professionals have been formally or informally charged with creating training effectiveness and moving beyond simply providing effective training. (Office of Personnel Management, 2011, p. 126)

The OPM field guide is moot on the possibility, though, that a correlation may exist between the first two levels in evaluating the effectiveness of training and the effects of training on the overall agency mission. If there is no correlation, then perhaps the training being provided may have been taught effectively but may not be the training needed by the organization.

The United States Air Force Research Laboratory conducted a study in 1999 titled, "A Meta-Analysis of the Relations Among Training Criteria." The study acknowledged that the Kirkpatrick Model was the industry standard despite there being some flaws due to an over-simplistic breakdown of evaluating the effectiveness of

training programs. In this meta-analysis only, modest correlations were found between those levels (1 and 2) the researchers deemed affective and those levels (3 and 4) that they deemed as measures of utility. The researchers did acknowledge the importance of gauging Level 1 reactions to determine whether students viewed the training they received positively or negatively and what effect those views might have on management's view of the training program or on future students' willingness to enroll in the training.

The researchers concluded that additional research is needed to evaluate if asking more focused Level 1 reaction questions that were specific in their questioning as to the level of relevancy the training they had just taken had to their job would yield a more definitive correlation between Level 1 and Levels 3 and 4 (Air Force Research Laboratory, 1999). With regard to Level 1, just as the Air Force Research Laboratory findings recommended, this study focuses on those questions in the Level 1 survey about the student's views on the relevancy of the course to their job, e.g., is the course of value to them in their current or future work?

In 1989, 10 years prior to the United States Air Force Research Laboratory's study on correlations between Kirkpatrick's levels of evaluation, George Alliger and Elizabeth Janack did a study looking at the Kirkpatrick Model titled, "Kirkpatrick Thirty Years Later." One of the facets of this retrospective review of the Kirkpatrick Model was to look for any studies that had found correlations among the various levels of the Kirkpatrick Model. What they found was that very few studies looked at the Kirkpatrick Model in its entirety and that most studies only looked at one level of the Kirkpatrick Model. They stated, "The fact that the vast majority of articles reviewed did

not report inter-level correlations, even when it was highly likely the data would have allowed such correlations to be calculated, may signify that the hierarchical model is simply assumed to be correct" (Alliger & Janack, 1989, p. 337). Alliger and Janack (1989) assumed there was causality in the hierarchical model of Kirkpatrick's four levels, and if there was such a causality, then it can be inferred there must be a correlation between the levels. Alliger and Janack (1989) proposed two different causality models, one which excluded the reaction level and had both upward and downward interrelation between learning, behavior and results, and the other, which was more traditional in which each level simply affected the next higher level.

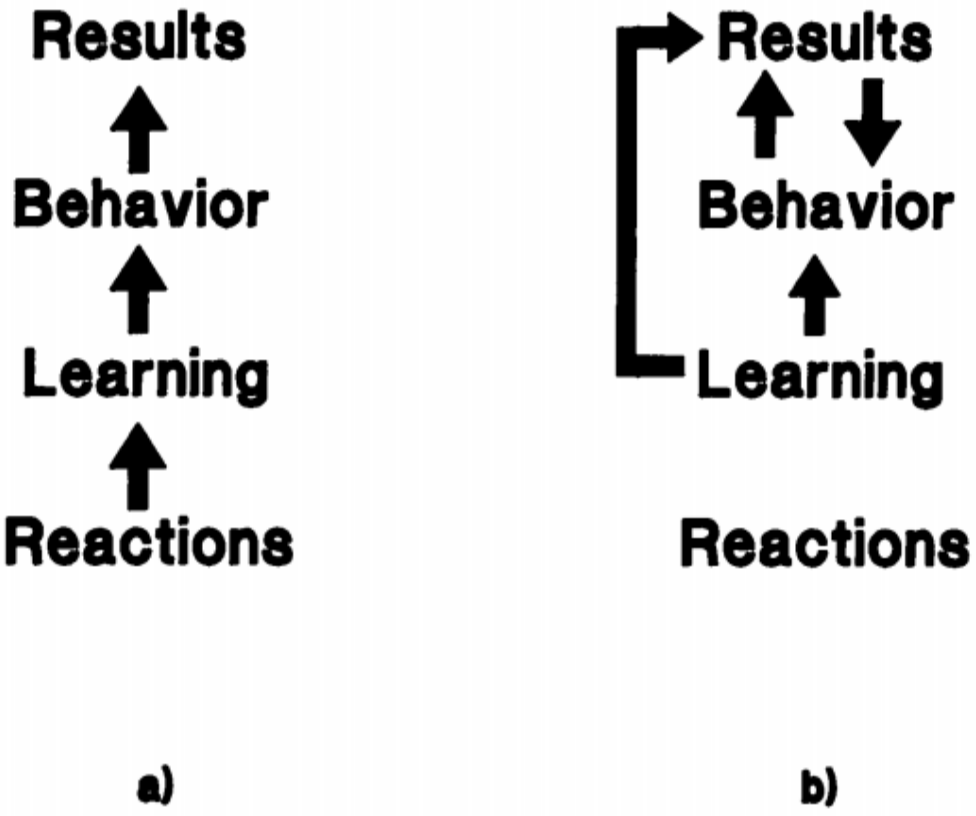


Figure 1: **The a) causality in the hierarchical model and b) an alternative model of causality among Kirkpatrick's four levels of training criteria**

Figure 6. *Alliger and Janack Causality Among Kirkpatrick's Four levels* (Alliger & Janack, 1989)

A 2014 study conducted at King Saud University on research methodology workshops for healthcare professionals found that all of Kirkpatrick's four levels were extremely useful in evaluating the effectiveness of the workshops themselves. This is one of the few studies that took a holistic approach to the Kirkpatrick Model to ascertain the value to the organization of the training or education provided. The researchers found that the information gleaned from evaluating all four levels was both quantitative

and qualitative, providing instructors with valuable data that can be utilized to not only improve the workshops but justify their utility to the institution. Feedback from participants was deemed useful at all four levels of evaluation, with the Level 4 feedback showing a 10% increase in research at the institution directly attributable to the research methodology workshops (Abdulghani, Shaik, Khamis, Abdulmajeed, Irshad, Khali & Isnan, 2014).

Sarah Yardley and Tim Dornan's research in 2012 had a different conclusion. They found Kirkpatrick's methods as too simplistic for all but the most basic of training programs for medical education. "Kirkpatrick's levels, introduced to evaluate training in the industry, involve so many implicit assumptions that they are suitable for use only in relatively simple instructional designs, short-term endpoints and beneficiaries other than learners" (Yardley & Dornan, 2012). Yardley and Dornan, though, do admit their research focused on the learner and not the results for the industry within which the learner was working. Yardley and Dornan (2012) believed that Kirkpatrick's level required too many qualitative assumptions by the evaluators to be objective in measuring the effectiveness of the education received.

Kirkpatrick readily admits his evidence at Levels 3 and 4 is more circumstantial than irrefutable, and what is deemed successful or not is often defined by higher-level managers not directly involved in the training or education. Kirkpatrick argues that educators and industry training managers will often default to the Level 2 assessment and go no further. Typically, once the educator is satisfied, the student has mastered the learning objectives of the course and they believe their job is done. The learning officer or training manager will tout the student reaction surveys and show evidence of meeting

the desired learning outcomes, and that is where they will end in their justification of the value of the training given. Industry, though, cannot stop there. Industry must evaluate further to see if what was learned by the student is indeed having the desired effect. Kirkpatrick argues only leadership can determine what is or is not successful for their organization, but the training manager can be proactive and build a mixed-methods case utilizing all four levels and management's approved definitions of success to prove the value of the training or education program in question (Kirkpatrick & Kirkpatrick, 2010).

The Return on Investment (ROI) Methodology

Dr. Jack Phillips developed a method for evaluating the effectiveness of training that, he argues, has surpassed the Kirkpatrick Model for evaluating training. "The ROI methodology is now the most used evaluation system in the world, adopted by 5,000 organizations in 65 countries. More than two-thirds of the Fortune 500 companies, 26 federal governments and large NGOs such as the United Nations are using it. More than 100 universities are using this methodology, along with 300 healthcare delivery organizations funded by both public and private entities" (Phillips, Ray, & Phillips, 2016, p. 49). What Phillips has done with his model is to add a fifth level to Kirkpatrick's four levels in which he monetizes the training in such a way to show an organization their ROI in monetary figures. This fifth level is of definite value to organizations looking for a tangible estimation of what kind of monetary ROI there is for the training or education program being evaluated and adds to the body of knowledge regarding the study of evaluating training effectiveness.

Phillips's fifth level has the evaluator first capture the costs of the education or

training program, which he defines as program costs. These costs include research design and development, materials, facilitator or instructor, facilities, travel and lodging, participant salaries and benefits, administrative and evaluation. The costs are added up and then divided into what Phillips calls program benefits.

Program benefits must be adequately defined for the ROI level to be considered credible. Examples of benefits that potentially can be measured include profit or savings from the output, quality costs, linking with other measures, participant estimation, supervisor/manager estimation and staff estimation. Phillips emphasizes that other intangible benefits might not be measurable that still should be listed to show value. Intangible benefits examples include increased employee morale, improved communication, reduction in complaints, reduced employee stress, increased teamwork, brand awareness and improved image. The ROI percentage calculation is shown in figure 8 below (Phillips et al., 2019).

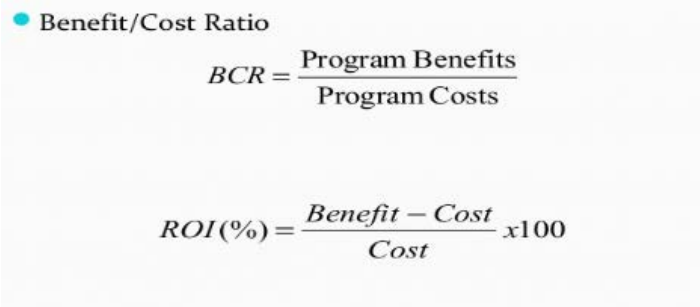


Figure 7. *Phillips's ROI Formula*

The main difference between Kirkpatrick and Phillips's methods comes down to a disagreement as to whether training or education program benefits can be monetized in such a way as to show the ROI. Both Kirkpatrick and Phillips's training evaluation methods argue the need to build a case showing, progressively from Level 1 onward, the

value of a training program. The two methods only differ at Level 5 and as to whether the program benefits can truly be monetized.

Phillips, like Kirkpatrick, also emphasizes that not all training programs need to be evaluated at every level. Phillips says Level 1 should be run on virtually all programs, Level 2 at 60% to 90%, Level 3 at 30% to 40%, Level 4 at 10% to 20% and Level 5 at only 5%. Excluding Level 5, Phillips's evaluation recommendation is almost identical to Kirkpatrick's. Both methods emphasize that the less costly the training program, the fewer evaluation levels that need to be accomplished. Only very expensive training and education programs should be evaluated at the top levels (ROI Institute, 2018). To put it another way, as the cost of the training or education program increase for an organization, management will demand more in-depth and definitive evidence that the training program is achieving its desired results (Phillips, Phillips, & Ray, 2015).

Kirkpatrick's four levels of evaluation have created a plethora of hybrids, and even Phillips, who claims his method is now the most widely used, readily admits that the ROI method is a result of the Kirkpatrick Model for evaluation. Academics continue to argue the merits of the Kirkpatrick Model. "Researchers often strive for purity and attempt to address every scenario or situation resulting in models with many parts, components and formulas that are often frightening and confusing to those charged with doing something about it" (Phillips, Phillips, & Hodges, 2004, p. 8). Phillips argues that the Kirkpatrick Model, and by extension his ROI model, are theoretically sound and yet simple and usable. Using the Kirkpatrick Model, practitioners can apply the levels of evaluation in a systematic, understandable way and defend the validity of their findings

to management. This is evidenced by the OPM guide, cited earlier, that uses the Kirkpatrick Model for the foundation of the guidebook. The United States Government, by its emphasis on the validity of the Kirkpatrick Model, agrees with Phillips's assertion that the Kirkpatrick Model is sufficient in rigor to satisfy most organizational needs to evaluate training and education programs.

Summary

The literature review included a history of JSOU, PME and how JSOU has evolved to meet the needs of USSOCOM. This historical review reinforced the idea that JSOU is an open and adaptive system that utilizes feedback to adjust to the needs of the populace it serves (Kast & Rosenzweig, 1972). This idea of JSOU as an adaptive educational system was further supported by JSOU's adaptive curriculum review process that reflects Romiszowski's textbook for instructional systems designers (Romiszowski, 2016). JSOU's usage of the Kirkpatrick Model is a method of gathering the feedback an adaptive system involved in education and training needs to stay relevant.

No research was found that used the Kirkpatrick Model to evaluate SOF-specific education programs like those taught at JSOU. The lack of research confirmed a gap in the literature. Although the Air Force conducted a study looking for a correlation between Kirkpatrick's levels of evaluation, it was done at the meta-analysis level and found little correlation between Kirkpatrick's four levels. The researchers recommended further study was needed using more focused Level 1 questions that were relevant to future job performance (Air Force Research Laboratory, 1999). The research also revealed that most organizations do not execute all four levels of the Kirkpatrick

Model for myriad of reasons, mostly tied to resourcing and the extra costs associated with conducting all four levels (Kennedy, Chyung, Winiecki, & Brinkerhoff, 2014).

Through the literature, it can be surmised that the Kirkpatrick Method, along with its hybrid associate the Phillips ROI Model, is still the standard for evaluating most government and private industry training programs as evidenced by OPM's almost exclusive reference to Kirkpatrick in their Training and Evaluation Guide along with Phillips assertion in a widely publicized industry periodical (American Society for Training and Development, 2009; Office of Personnel Management, 2011; Phillips, et al., 2015).

Lastly, Praslova's article on adapting the Kirkpatrick Model for higher education makes a valid argument that the Kirkpatrick Model can be used for not only training programs but education as well (Praslova, 2010). This was reinforced by the Saudi hospital study where Kirkpatrick's Model was used to evaluate the effectiveness of on-site continuing education for medical professionals (Abdulghani, et al., 2014) and Bedggood' s research of Level 1 reaction surveys at eight Australian universities (Bedggood & Pollard, 1999) along with the Iranian nurses' education program usage of Kirkpatrick cited in Advances in Medical Education and Practice (Piryani, et al., 2018).

There were detractors as well. Yardley and Dornan see the Kirkpatrick Model as simplistic and too subjective in how the model defines success. They find the Kirkpatrick Model inadequate expect for evaluating the effectiveness of the simplest of training programs (Yardley & Dornan, 2012). Kirkpatrick admits to the subjectivity of his evaluation model and argues that it is perfectly satisfactory for management to define success as it pertains to their organization (Kirkpatrick & Kirkpatrick, 2010).

The next chapter includes a discussion on the methodology for conducting the research for the study. The discussion will include the research method; research questions; JSOU's Levels 1, 3 and 4 surveys; population and sample frame. JSOU's survey process, analysis, validity, reliability and the author's data analysis is also discussed.

Chapter III

METHODOLOGY

This study uses a mixed-methods approach of both quantitative and qualitative methods to assess JSOU's usage of the Kirkpatrick Model to determine the effectiveness of JSOU's education programs in meeting the needs of USSOCOM. The study focuses on JSOU's AY 2018, which ran from 1 October 2017 to 30 September 2018, see Appendix B. The AY 2018 data, accumulated on JSOU course offerings using either quantitative or qualitative method analysis alone is inadequate for gaining a sufficient understanding of JSOU's impact or lack thereof to USSOCOM.

John Creswell's textbook, a *Concise Approach to Mixed Methods Research*, mixed-methods approach aligns well with Kirkpatrick's emphasis on building a body of evidence to support the analysis of an education or training program. Mixed methods are desirable in specific cases or instances where quantitative research may not probe deep enough into the perspectives of individuals. However, qualitative research may not assist the researcher in generalizing trends or analyses from a small group of people to a larger group; specifically, "it does not precisely measure what people in general feel" (Creswell, 2015, p. 15). Creswell (2015) argues that the mixed-method approach enables a researcher to take the best of quantitative and qualitative research, allowing the researcher to obtain two different perspectives, gain a more comprehensive view of the problem, add to quantitative data details with context and personal experiences from the qualitative side, conduct preliminary exploration with individuals to make sure the

quantitative research fits the participants and site used for the evaluation and lastly allow follow up of quantitative data with qualitative analysis to explain the outcomes better (Creswell, 2015).

The most appropriate technique for this examination is the case study approach applying mixed-methods research of Kirkpatrick's application at JSOU. A case study investigates a "contemporary phenomenon within its real-life context" (Yin, 2003, p. 13). The purpose of a case study may be descriptive as when a sociologist describes the subculture of a criminal gang or an in-depth study can find explanatory insights that researchers can use to discover cultural nuances to prevent the spread of disease or understand the social hierarchy of a small town and so forth. The case study is an in-depth examination of a single instance. It is varied in how it is applied, whether it be a period of time or an organization with the limitation of the study to a particular instance of something being the overriding characteristic. The goal of a case study is wide-ranging. It could be descriptive, can be explanatory or have the purpose of discovering flaws and then providing suggested modifications to existing social theory. Knowing the literature beforehand is a must to improve or rebuild existing theory instead of approving or rejecting it (Babbie, 2016).

Yin concludes that no two case studies are alike, but he recommends that case studies should adhere to some basic guidelines. First, be thorough in identifying and incorporating data relevant to the testing of logical explanations. Second, use tables and exhibits, when feasible, to show how the data collected was used to test the most crucial part of the explanations. Third, explore alternative explanations. Lastly, summarize the

main and any possible rival explanations as it pertains to the discussed outcomes (Yin, 2009).

Applied Research

The study of public administration originated in practical research with most of its original financial support focused on the useful incentives in solving problems within the government using applied research (Bender, 1994). Applied research is done, not because the researcher necessarily wants to discover something new for the sake of adding to the body of knowledge of a field of study but because someone has deemed it necessary to research to achieve an objective (Rothschild, 1972). This case study of JSOU is an applied research project following the tradition of public administration's roots in focusing on a practical need within JSOU. This study uses mixed-methods research in a case study context to develop information to help solve an immediate problem.

Applied research differs from basic research because its purpose is to answer "specific questions aimed at solving practical problems. New knowledge acquired from applied research has specific commercial objectives in the form of products, procedures, or services" (University of Texas El Paso, 2019). For JSOU, that practical problem is determining whether the Kirkpatrick Model can be applied using the information from JSOU's surveys, meeting minutes, and interviews of senior leaders. If so, can the author show JSOU leadership that Kirkpatrick levels of evaluation are sufficient for JSOU leadership to adequately inform USSOCOM of the impact JSOU is having on the USSOCOM enterprise?

"The applied research environment is often complex, chaotic and highly political

with pressure for quick and conclusive answers, yet little or no experimental control. Basic research, in comparison, is firmly grounded in the scientific method but has as its goal the creation of new knowledge about how fundamental processes work" (Bickman & Rog, 2009, p. X). Applied research attempts to improve the understanding of an issue with the goal of contributing to a finding solution, whereas fundamental research intents to expand knowledge. The context where applied research can be conducted is varied and includes business, military, government and community settings. These diverse settings each come with their set of unique challenges. The applied researcher's focus is on the application of the findings to the organization or community being studied. Basic research, in contrast, can be isolated and focused and is relatively free from the business and governmental variables that occur in applied research. The basic researcher is better able to segregate and control the environment within which he or she are studying (Bickman & Rog, 2009).

In summary, basic research answers the fundamental question of how things work. In contrast, applied research creates new technology processes or products from the basic research that has already paved the way (University of Texas El Paso, 2019). This case study falls within the realm of applied research through its application of the Kirkpatrick Model in evaluating the effectiveness of JSOU's AY 2018 course offerings to its target audience, USSOCOM.

Why Program Evaluation?

Both the Government Accounting Office (GAO) and Office of Management and Budget (OMB) are tasked with enforcing government accountability in agencies' expenditure of government resources. The GAO explicitly stated in a 2017 report to

Congressional committees that "lack of evaluations may be the greatest barrier to their informing managers and policymakers and constitutes a lost opportunity to improve the efficiency and effectiveness of limited government resources" (GAO, 2019). The DOD, though, has a robust program evaluation effort and has multiple offices reviewing programs depending on the type of program being evaluated. Each Service within the DOD also conducts program evaluations at the Service level. The Air Force stated in a 1992 report, addressing program evaluations related to training and education programs, that "program evaluation should be viewed as an iterative process that begins before the program is implemented and continues to provide formative support throughout the life of the program. Evaluators have realized that the inherent multiplicity of programs requires different evaluation activities to be employed based on the program's stage of development and on the needs and expectations of the program decision-makers" (Mattoon, 1992, p. 26). JSOU must assess the effectiveness of its current evaluation program (Kirkpatrick) to ensure JSOU is a good steward of limited government resources, as emphasized in the 2017 GAO report calling for governmental agencies to be diligent in their application of program evaluations, whenever possible.

The Joint Special Operations University Data

Fortunately, the author has permission from JSOU leadership to access JSOU's AY 2018 Levels 1 through 4 data. JSOU uses this data to justify to ACCET the university's commitment to continuous improvement and educational excellence. The information for this case study is secondary data in the sense that it was collected by JSOU's Institutional Effectiveness professionals for its usage and was not analyzed the way it will be in this case study. Nonetheless, the raw data JSOU has compiled is vast in

scope and was tailored by its Kirkpatrick-certified analyst to conform to the Kirkpatrick Model. Unfortunately, due to workload and insufficient manning in the Institutional Effectiveness section, the office has not taken all of its data and reviewed it from a holistic perspective to evaluate JSOU's effectiveness (Edwards, 2018).

Level 1: Reaction

The data used to compile the annual JSOU Factbook hold a wealth of Level 1 information that can be mined for analysis beyond the lens currently used to create the annual JSOU Factbook. Using the raw data that was used to compile the JSOU Factbook will enable the author to pull Level 1 student reaction data from the document. The types of courses surveyed varied with some courses being discontinued and new ones being added. However, all JSOU courses use the same Kirkpatrick Level 1 end-of-course survey for students to rate their satisfaction with the course (Appendix C). The Kirkpatrick-specific portion of JSOU's survey asks the student five different questions regarding their satisfaction with the course. The survey uses a Likert scale-type rating for the questions, being changed to a number from one to five, with five being the highest level of satisfaction. These questions are as follows:

1. The course was well organized.
2. The objectives of the course were successfully achieved.
3. The content of the course was what I expected or better.
4. The information provided in the course will be useful to me in my job.
5. I would recommend this course to others.
6. Overall satisfaction with the course

The scores for each question are compiled into an average (mean), and that is the

overall score for that specific iteration of that course. The data is reviewed for any possible information that addresses Kirkpatrick's Level 1 criteria. Questions three, four, five and six of the reaction surveys will be isolated, and their mean average will be compared to the overall survey score to see if there is any discernible difference. Just because a course was well organized and, in the opinion of the student, met its stated course objectives (questions one and two) does not mean the course met Kirkpatrick's intent of measuring the success of the course to USSOCOM. After removing questions one and two from the JSOU survey, the mean average of JSOU's Level 1 surveys on the one to five Likert scale for each iteration will be compared via a scatter plot diagram to the mean average of JSOU's AY 2018 Level 3 surveys which use the same one to five Likert scale to determine if there is any correlation. Only course iterations that have both Level 1 and 3 data will be analyzed for this portion of the study.

Lastly, question four of the Level 1 survey will be isolated, and its mean average will be compared to JOSU's Level 3 survey mean average to discern whether there is any correlation between the student's perception of the on the job utility of the knowledge they have gained from the course, see Appendix D. The university also compares answers from the Level 3 surveys as to whether the students have put into practice the knowledge gained from the course on their job. Only course iterations that JSOU has both Levels 1 and 3 data are analyzed for this portion of the study. A scatter plot diagram is used to determine if there is any correlation between the mean of the Level 1 survey question number four and the mean average of the aggregate of the Level 3 survey data.

Level 2: Learning

"All JSOU courses will be reviewed annually by the Curriculum Review

Committee (CRC). CRC: the committee is the team responsible for the development, implementation, and assessment of curriculum and student learning. This committee conducts an annual review of all courses" (JSOU, 2017b, p. 3). This quote is directly from JSOU's operating instruction that governs how JSOU manages the curriculum.

Course Objective:

Summative Assessment (s) Planned:
(In chronological order, describe each assignment that is scored with a grade or a P/F and, if applicable, explain how it is connected to other assessments. A series may be described in one entry).

1.
2.

Name of Assessment *(list major assessments and the categories for other types – e.g. discussion or participation – which comprise a % of the final grade):*	**Percentage of Grade:**	**Scoring Method:**

Course Learning Outcomes:	**Test**	**Paper**	**Briefing**	**Practical Exercise**	**Other: e.g. Team Project**
Outcome 1 description. . .					
Outcome 2 description. . .					
Outcome 3 description. . .					
Outcome 4 description. . .					

Figure 8. *JSOU Course Assessment Plan*

Course assessment plans are part of the documentation provided to the committee for the annual curriculum review. The committee reviews these course assessment plans for sufficiency in meeting the stated desired outcomes of the course.

The Level 2 analysis was conducted via a qualitative review of JSOU's CRC

meeting minutes for committee comments about the course assessment plan and any subsequent discussion that took place during the CRC meeting regarding course assessment for the course under review for AY 2018. The author looked for any notable concerns or discussion by the committee members relating to the course's design and its ability to meet the curriculum design team's stated course objectives. Examples of issues addressed by the author vary from concerns over student pass rates for the course to the adequacy of the end-of-the course assessment. As detailed in the literature review, JSOU has an extensive curriculum review process that includes ensuring students are assessed at the appropriate level for the subject matter being taught. The committee reviews each course annually and ensures that not only are students being evaluated but that the assessments accurately evaluate the desired learning outcomes of the course.

Level 3: Behavior

JSOU's Institutional Effectiveness Office created a Level 3 survey that is sent to recent graduates of select JSOU courses (see table 9 in Chapter IV). This survey targets recent graduates of courses and homes in on whether the student has adjusted their behavior in the workplace to incorporate what he or she learned at JSOU.

This survey was reviewed by the Kirkpatrick Institute for suitability to be used as a Level 3 survey following the Kirkpatrick Model (Edwards, 2018). The questions in the survey are rated on a Likert scale of one to five, with five being the most satisfied. In addition, there is an area for the respondents to write any comments they want to leave regarding their learning experience at JSOU, specifically any suggestions as to how the course may be improved and any comments as to the relevancy of the course the respondent took as it relates to their job. The survey also includes a section that asks the

respondent to identify the specific course the individual took at JSOU, whether it was held at JSOU's main campus or one of JSOU's many course offerings at various SOF-affiliated military bases or online.

The questions in this survey that specifically pertain to Kirkpatrick's Level 3 evaluation are as follows:

1. Opportunity to apply what you learned.
2. Confidence applying what you learned.
3. Commitment to applying what you have learned,
4. Desire to continue learning in this subject area.
5. Importance of course content.

The following questions were asked with a Likert scale of 1 to 5, also with five now being strongly agreeing and one strongly disagreeing.

1. The course increased your knowledge of the subject matter.
2. The course has improved your ability to meet future challenges.
3. The course prepared you to interact more effectively with other organizations/agencies.
4. The educational experience has been useful to you in your job.
5. The organizational investment to send you to this course was worthwhile.
6. You were satisfied with the course.
7. You would recommend the course to others.

All the Level 3 surveys will be reviewed looking for qualitative statements in the comments section of the survey as well as reviewed quantitatively looking for an overall average mean of how JSOU students rate the courses they have taken in relation to

Kirkpatrick's Level 3 evaluation of changes in workplace behavior. Additionally, question 4 regarding usefulness in the workplace will be compared to the level 1 question number four that asks the respondent to rate the extent to which the student expects the course he or she just completed to be useful in his or her job.

The hypothesis for this comparison between question four on the Level 1 survey and question four on the Level 3 survey is as follows:

> *Hypothesis*: A correlation does exist between the relevancy question asked in JSOU's Level 1 and Level 3 surveys regarding the graduate's self-assessment of the usefulness of the course toward his or her job.

Since there are only two variables, a Pearson Product Moment Correlation Coefficient, commonly referred to as a Pearson *r,* will be used to test the null hypothesis. "The Pearson correlation coefficient, *r*, can take on values between -1 and 1. The further away *r* is from zero, the stronger the linear relationship between the two variables. The sign of *r* corresponds to the direction of the relationship. If *r* is positive, then as one variable increases, the other tends to increase. If *r* is negative, then as one variable increases, the other tends to decrease. A perfect linear relationship ($r = -1$ or $r = 1$) means that one of the variables can be explained by a linear function of the other" (University of Texas Austin, 2019).

The null hypothesis for the correlation between the Level 1 survey question and the Level 3 survey question is as follows.

> *Null Hypothesis*: There is no correlation between the Level 1 question regarding the usefulness of the course taken to the student's job, and the Level 3 survey question about the student's assessment of the course as being useful to his or her

job within the three- to six-month timeframe after having returned to his or her job.

In addition to the Pearson *r,* as stated earlier, a scatter plot diagram was created of the mean averages of the Level 1 and Level 3 survey questions to see if a visual portrayal of the data would show similar results or not thus acting as a cross-check for the Pearson *r* test on correlation. Both types of analyses are easily done in Microsoft Office's Excel program, provided the data is adequately categorized.

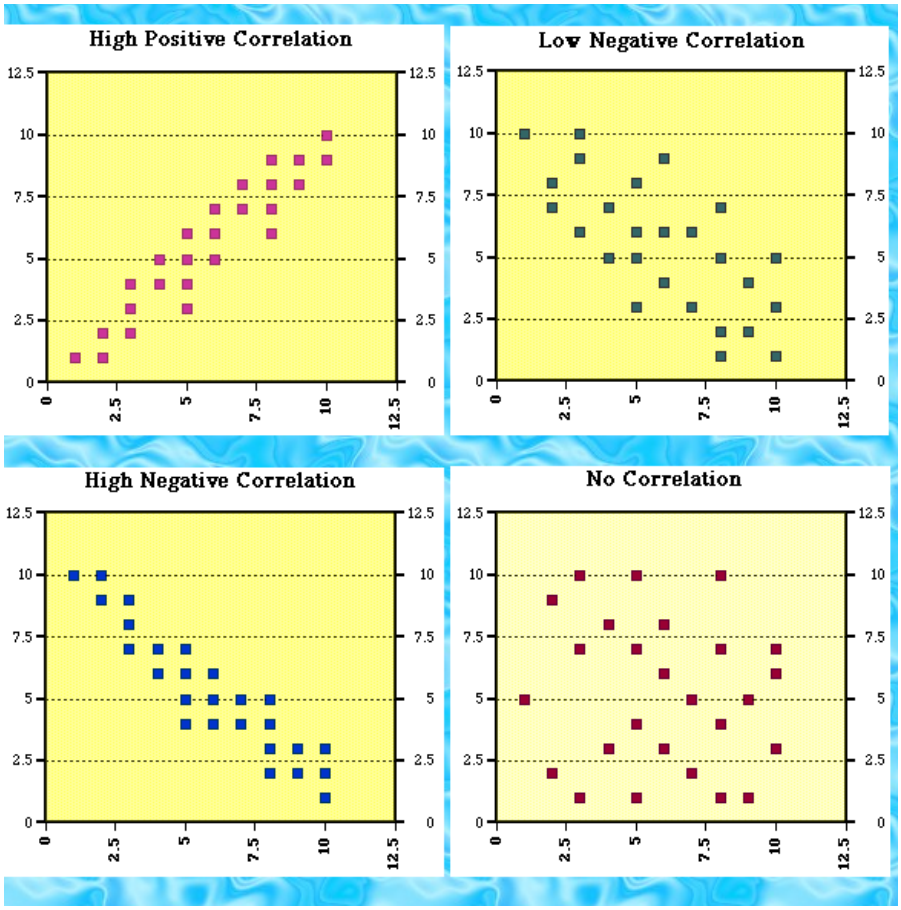
For the correlation, using the Pearson *r,* the following numbers between one and a negative one will tell whether the correlation is positive, negative or nonexistent. A positive number of one, or close to it, will indicate a positive relationship. A negative number of one, or close to it, will indicate a negative relationship. A result of zero, or close to it, will indicate a very weak or nonexistent relationship.

For the Pearson *r,* the following formula is applied using Excel with x being the individual sample points from the Level 1 question and y being the individual sample points from the Level 3 question. The sample size will be represented by *n.* Lastly, *r*, as stated earlier, will be the actual correlation with the number ranging from a negative one to one with a number close to zero indicating a very weak or nonexistent relationship between the two questions from the Level 1 and 3 surveys.

$$r = \frac{1}{n-1}\sum\left(\frac{X-\bar{X}}{Sx}\right)\left(\frac{Y-\bar{Y}}{Sy}\right)$$

Figure 9. *Pearson R Formula* (Yale, 2019)

On the scatter plot analysis, the independent variable (question four from the Level 1 survey) is plotted on the x-axis (horizontally), and the dependent variable (question four from the Level 3 survey) is plotted on the y-axis (vertically). The author is looking for a discernible visible trend line by plotting the data where the data are displayed as a collection of points with each point having the value of one variable determining the location on the horizontal axis and the value of the other variable determining the position on the vertical axis. This visual representation will show whether a correlation does or does not exist that may or may not be reflected by the Pearson *r* test between the Level 1 question and the Level 3 question. Possible outcomes of the scatter plot are visually represented in the example graphs below.



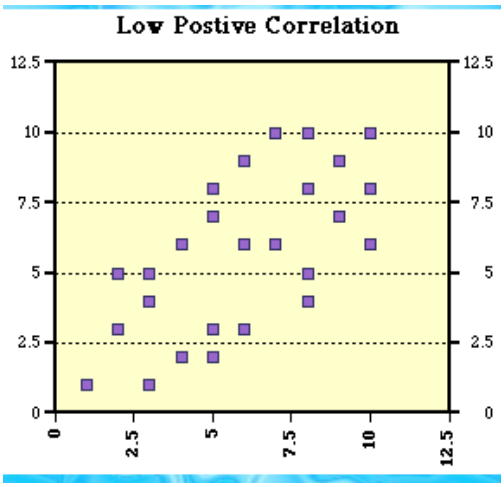


Figure 10. *Scatter Plots Showing Varying Degrees of Correlations* (Illinois University, 2019)

As stated earlier in the literature review, many organizations stop at Level 1 surveys for myriad reasons, such as the cost of reaching out to graduates, time constraints. What if it were possible to show that not all JSOU courses need to have Level 3 evaluations completed to determine if the course material is being applied by the student at his or her work? It is beyond the scope of this case study to unequivocally determine the answer to this question. However, through the lens of an applied research study, JSOU leadership might infer that answer and welcome the opportunity to exercise their managerial prerogative to limit the number of Level 3 surveys being conducted.

The Level 3 data is reviewed in its entirety and a mean score is given using the Likert scale to determine whether JSOU students are actually changing their behavior at their work after having taken a JSOU course. To put it more simply, are JSOU students applying what they learned back on the job?

Level 4: Results

Level 4 survey reviews will be qualitative in design and based on analysis of senior leader interviews and questionnaires (see tables 10 & 11 in Chap 4) that JSOU

collected at the beginning of AY19 while working on a revised JSOU strategic plan. These interviews and questionnaires were backward-looking in the sense of asking the respondents questions regarding JSOU's past performance and what, if any, recommendations the respondent had for JSOU's future. Since the interviews and questionnaires were sent within the first few months of AY19, it is inferred that the responses were generally a reflection of the respondent's views of JSOU's AY 2018. These interviews and questionnaires were specifically created to assess SOF senior leadership's perception of JSOU and its service to the SOF enterprise, see Appendix E. Questions in the interview were the following:

1. In your own words, what is the purpose of JSOU?
2. What is JSOU not doing that it should be?
3. Do you have any recommendations as we consider the future of JSOU?
4. What is JSOU doing right?
5. What needs improvement?
6. What gaps do you see in SOF education?
7. What is the motivation of sending personnel to JSOU for education?

The notes from these interviews will be reviewed for any information that might indicate SOF leadership level of satisfaction with the education JSOU is providing the SOF community.

In addition to the one-on-one interviews, JSOU developed a questionnaire that was sent to senior SOF leaders that were not interviewed in person. This questionnaire looked at not only senior leaders' current satisfaction with the education JSOU provides but also asked how JSOU could improve its educational offerings such as adding new courses,

changing the delivery method of courses or shortening or lengthening the course. The questionnaire was distributed by email at the request of the USSOCOM chief of staff to obtain stakeholder input as to whether JSOU was prepared to meet the current and future needs of the SOF community.

The questions in the survey that pertain to the Kirkpatrick Level 4 evaluation focused on the SOF leadership's familiarity with JSOU's, the university's role in educating the SOF enterprise, the value of JSOU to SOF, areas of military concern that JSOU should educate the SOF community on and lastly any comments (Appendix E).

These Level 4 surveys and interviews were not specifically focused on any one course like the Level 1 through 3 evaluations. However, they provide essential feedback to JSOU as to whether the institution as a whole is meeting senior leaderships' expectations. These interviews and questionnaires will be reviewed through the analytical lens of a qualitative review since the number of survey and interview respondents are low in number. It can be argued from JSOU's perspective that these Level 4 evaluations are the most important because the senior leadership is the ultimate paying customer in the sense that they are the ones that make decisions regarding JSOU's funding and direction. If USSOCOM senior leadership deemed JSOU not to be meeting the needs of the SOF community, leadership could disband JSOU, and the resources used to man and fund USSOCOM's educational efforts be diverted to other USSOCOM priorities.

These Level 4 questionnaires and interviews are critical to JSOU because of the target audience. The individuals questioned collectively hold the fate of JSOU in their hands. As Kirkpatrick argues in his book, *Training on Trial*, it is vital for the chief learning officer of any organization to build a case as to how effective their education and

training program is in meeting the needs of the organization (Kirkpatrick & Kirkpatrick, 2010). JSOU can build its case by providing leadership with evidence of JSOU's successes via the data gleaned from applying the Kirkpatrick Model to JSOU's curriculum. The Level 4 data JSOU has is not as hard-hitting as an industry's level 4 data that show production increased 30 percent after a new training program was implemented. JSOU's data is opinion-focused, but as stated earlier, the opinions are those of key leadership that controls the fate of JSOU.

Validity and Reliability of this Study

This study is unique to JSOU and cannot be generalized beyond the university due to the factors of working outside of a controlled research environment. These factors include the potential of low probability sampling at Levels 3 and 4. Response bias may be another factor since those students, and senior leaders that know of JSOU or believe the knowledge they gained from attending JSOU warranted a response. Interview bias was also considered but knowing that the interviews were conducted by a qualified government analyst educated in conducting interviews for operational analysis lessens this concern. These concerns can be mitigated by taking a holistic approach using all the data, both quantitative and qualitative. Applying a mixed-methods critical eye to cross-check trends and indicators can provide insight into the complex issue of conducting a program evaluation of JSOU utilizing the Kirkpatrick Model. As an employee of JSOU, the author is sensitive to the author's potential for a reluctance to publish anything that might negatively portray JSOU (citation bias) and make every effort to maintain observer neutrality as much as practical given the nature of the case study (Pannucci & Wilkins, 2010).

Summary

Following a mixed-methods approach, using multiple data sources to cross-validate provides a means of corroborating evidence as to whether using the Kirkpatrick Model as measured via surveys, student assessments, CRC minutes, senior leader interviews and questionnaires paint a sufficient portrayal of the effectiveness of JSOU in accomplishing its mission as outlined in its charter of educating the SOF enterprise. This case study is essentially a program evaluation of JSOU.

Chapter IV

ANALYSIS OF RESULTS

Following a case study approach, the data in this chapter represents all four levels that Kirkpatrick proposes in his method of evaluating the effectiveness of training and education programs. The data analysis was reviewed within the context of the singularity of this specific AY 2018 at JSOU. Both qualitative and quantitative data were analyzed so that the complexities of a real-life situation would be studied from multiple perspectives. The data are analyzed based on what Kirkpatrick level it is associated with.

Level 1 data will be analyzed through a quantitative lens. There are 7,164 Level 1 surveys available for analysis. These surveys used a readily quantifiable one to five Likert scale response to the questions posed in the survey. The Level 2 data will be reviewed strictly through a qualitative lens by reviewing all of JSOU's 2018 CRC meeting minutes. These minutes are sufficiently detailed to give the author a solid qualitative foundation to use to make inferences as to the effectiveness of JSOU in meeting Kirkpatrick's Level 2 review criteria. Since the quantitative data from the Level 3 surveys are less prevalent, the data is reviewed both quantitatively and qualitatively to attempt to gain a more accurate picture of the students' views of JSOU after returning to their job. From the quantitative perspective, an analysis is conducted to ascertain whether a correlation exists between students' responses to the Level 1 survey and the Level 3 surveys. In addition, the Level 3 comments will be reviewed to ascertain if there are any discernible tendencies. The Level 4 data will be reviewed strictly from the

qualitative aspect since there are a very limited number of surveys and interviews to review. Those who provided the data for Level 4 were very senior leaders within the SOF enterprise. They are key stakeholders within the SOF enterprise, and their impressions of JSOU can have a tremendous effect on the university's course offerings and funding since they are the ones that either heavily influence or make those decisions within the command.

Level 1: Reaction

For JSOU the Level 1 data is the largest amount of quantitative data available for this case study. The return rate for this survey is 79.9%. In AY 18, there were 7,164 students out of 8,962 students who returned their Level 1 survey. The reason for such a high return rate is that the students most often complete the survey in class prior to graduation. This statistic reinforces both Kirkpatrick and Phillips's assertion that Level 1 data is the most prevalent data used by training and education programs to justify their effectiveness because this type of data is the most readily attainable (American Society for Training and Development (ASTD), 2009). Even here, though, where the standard practice is for JSOU students to complete the Level 1 survey prior to graduation, not all instructors enforced this practice, and 20.1% of the students never returned their surveys.

On the following page (Table 3) is a table showing all of the Level 1 data from JSOU's AY 2018 broken out by course and question with an overall average mean score for each question and an average of the total score for all questions. The data is also gradient with variations from red to green, showing data that deviates the most either in a negative direction (red) or positive direction (green) from the overall average score.

Table 3. *JSOU Academic Year 2018 Level 1 Survey Results*

Row Labels	Iterations	Students	L1Q1-Org	L1Q2-Objs	L1Q3-ContentExp	L1Q4-Useful	L1Q5-Rec	L1Q6-Satisfaction	Avg
DL	3	4084	4.38	4.35	4.26	4.36	4.29	4.30	4.32
Introduction to Irregular Warfare Distance Learning Course	1	432	4.20	4.16	4.11	4.20	4.15	4.15	4.16
Introduction to Special Operations Forces (Fully Online)	1	2982	4.57	4.56	4.46	4.51	4.50	4.51	4.52
Joint Special Operations Task Force	1	670	4.36	4.32	4.20	4.36	4.23	4.23	4.28
JSOU-EA	14	870	4.48	4.57	4.38	4.54	4.66	4.56	4.53
Enterprise Management Course	4	310	4.47	4.48	4.39	4.58	4.62	4.57	4.52
Joint Fundamentals Course	4	328	4.19	4.37	4.21	4.36	4.42	4.26	4.30
Joint Special Operations Forces Senior Enlisted Academy	4	211	4.61	4.68	4.37	4.58	4.78	4.66	4.61
Summit	2	21	4.87	4.96	4.72	4.72	4.96	4.96	4.86
Resident	204	4008	4.69	4.67	4.53	4.59	4.72	4.69	4.65
Advanced Special Operations Combating Terrorism Course	3	64	4.82	4.52	4.40	4.51	4.67	4.77	4.62
Asymmetric Warfare Course	3	101	4.43	4.19	4.01	4.14	4.06	4.19	4.17
Combined/ Joint Force Special Operations Component Commander's Course	1	27	4.96	4.79	4.67	4.88	4.92	4.83	4.84
Countering Terrorism Executive Interagency Seminar	2	30	4.81	4.61	4.63	4.51	4.81	4.80	4.69
Countering Terrorist Networks Interagency Seminar	2	41	4.53	4.51	4.30	4.38	4.67	4.59	4.49
Countering Violent Extremism	6	124	4.72	4.66	4.52	4.60	4.71	4.67	4.64
Countering Weapons of Mass Destruction Foundations Course	3	52	4.64	4.61	4.47	4.39	4.65	4.67	4.57
Counter-Proliferation Opportunity Design	2	13	4.30	4.30	4.45	4.45	4.55	4.65	4.45
Covert Action and SOF Sensitive Activities	5	55	4.76	4.82	4.76	4.66	4.91	4.85	4.79
Cultural Analysis in Special Operations	6	71	4.84	4.86	4.76	4.84	4.87	4.82	4.83
Cyber and Special Operations Intelligence	2	28	4.17	4.33	4.14	4.33	4.44	4.29	4.28
Design Thinking for Practitioners	2	23	4.73	4.81	4.83	4.83	4.80	4.81	4.80
Employment of Special Operations	3	22	4.79	4.71	4.60	4.80	4.73	4.77	4.73
Evolution of US SOF	2	11	4.73	4.73	4.32	4.22	4.68	4.61	4.55
Influence in Special Operations Course	3	35	4.81	4.68	4.54	4.65	4.78	4.75	4.70
Information Related Capabilities Seminar	1	15	4.44	4.11	3.89	3.11	4.22	4.33	4.02
Inter-Ministerial Collaboration Course	3	62	4.77	4.72	4.55	4.51	4.77	4.70	4.67
International and Interagency Special Operations	4	35	4.91	4.89	4.79	4.81	4.90	4.94	4.87
International Mid-Level Leader Course	1	7	4.43	4.86	4.71	4.71	5.00	5.00	4.79
International Special Operations Noncommissioned Officer Integration Course	7	125	4.77	4.53	4.37	4.47	4.76	4.65	4.59
International Summit Course	2	16	5.00	4.88	4.75	4.88	4.94	4.94	4.90
Introduction to Design Thinking	9	149	4.69	4.74	4.65	4.73	4.82	4.78	4.74
Introduction to Special Operations Acquisition Course	2	53	4.45	4.51	4.25	4.53	4.48	4.41	4.44
Irregular Warfare Course	3	49	4.85	4.83	4.71	4.82	4.85	4.84	4.82
Joint Civil-Military Operations Campaign Planning Workshop	2	41	4.71	4.70	4.50	4.78	4.70	4.62	4.66
Joint Special Operations Forces Pre-Command Course	3	114	4.74	4.59	4.44	4.63	4.70	4.68	4.63
Joint Special Operations Medical Orientation Course	2	48	4.94	4.87	4.85	4.85	4.90	4.87	4.88
Joint Special Operations Public Affairs Course	1	25	4.58	4.83	4.74	4.79	4.95	4.82	4.79
JSOAC Joint Operations Center	4	84	4.53	4.61	4.42	4.45	4.62	4.59	4.53
Maritime Operational Planning Course	2	49	4.78	4.78	4.55	4.63	4.77	4.72	4.70
MARSOF Logistics Course	2	40	4.57	4.48	4.62	4.43	4.76	4.65	4.59
Non-Standard Logistics Course	4	84	4.71	4.74	4.55	4.62	4.85	4.75	4.70
Operational Planning Course	8	274	4.61	4.52	4.53	4.55	4.70	4.59	4.58
Preparation of the Environment Orientation Course	4	55	4.87	4.89	4.67	4.85	4.87	4.87	4.83
Principles of Resistance in Modern Warfare	2	64	4.71	4.68	4.44	4.29	4.51	4.50	4.52
SOF Chaplain Spiritual Readiness Course	1	5	4.80	5.00	5.00	5.00	5.00	5.00	4.97
SOF Creative Problem Solving-Advanced	9	155	4.71	4.80	4.81	4.77	4.88	4.91	4.81
SOF Creative Problem Solving-Executive	4	29	4.68	4.77	4.70	4.67	4.81	4.72	4.72
SOF Design & Innovation 4-Day Inquiry Course	1	16	4.67	4.60	4.67	4.80	4.93	4.73	4.73
SOF Resource Management Course	1	21	4.32	4.55	4.32	4.68	4.73	4.55	4.53
SOF Sensitive Activities Foundations Course	1	13	3.15	3.62	3.54	4.31	3.92	3.92	3.74
SOLO Orientation	1	13	4.86	4.86	4.57	4.86	4.86	4.86	4.81
Special Operations Air Integration Course	5	80	4.79	4.62	4.37	4.29	4.68	4.54	4.55
Special Operations Aviation Planning Course	8	187	4.63	4.48	4.36	4.43	4.63	4.56	4.51
Special Operations Chaplaincy Scope of Practice	1	4	4.50	4.50	4.00	4.50	4.75	4.75	4.50
Special Operations Combating Terrorism Course	5	88	4.68	4.60	4.47	4.61	4.75	4.66	4.63
Special Operations Forces Integration Course	4	90	4.75	4.54	4.46	4.42	4.63	4.60	4.57
Special Operations Forces Interagency Collaboration Course	5	76	4.67	4.66	4.42	4.46	4.61	4.69	4.58
Special Operations Forces Security Cooperation Course	9	249	4.73	4.77	4.58	4.57	4.76	4.74	4.69
Special Operations Intelligence Course	3	34	4.61	4.57	4.30	4.61	4.73	4.58	4.57
Special Operations Planning Course	10	238	4.65	4.70	4.57	4.61	4.74	4.72	4.66
Special Operations Religious Support Team Orientation	2	61	3.91	3.90	3.77	4.35	4.17	4.01	4.01
Strategic Utility of Special Operations	2	13	4.78	4.94	4.59	4.88	4.88	4.88	4.82
Theater Special Operations Command Staff Education Course	9	258	4.75	4.71	4.51	4.46	4.60	4.66	4.62
TSOC Staff Preparation Course	3	36	4.55	4.63	4.43	4.61	4.61	4.65	4.58
USSOCOM Staff Education Program - Foundations	8	249	4.77	4.76	4.57	4.63	4.70	4.71	4.69
USSOCOM Staff Education Program - National	1	7	4.86	4.86	5.00	5.00	4.86	4.71	4.88
Grand Total	221	8962	4.67	4.66	4.51	4.58	4.71	4.68	4.64

JSOU offered 64 different courses, three of which were pilot courses and were not officially listed in the AY 2018 Factbook, yet all three courses were subsequently approved the following AY, therefore, they were included as fully approved courses

within the context of this study. There was a total of 221 iterations of the 64 courses offered in AY 2018.

Table 4. *2018 Level 1 Summary of Results*

Course Type	# of Students	Mean Average Satisfaction rate (5pt scale)
DL	4082	4.32
EA	870	4.53
Resident	4008	4.65

The overall satisfaction rate average for all JSOU courses when combining all courses in AY 2018 was 4.64.

Dropping questions 1 and 2 from the Level 1 survey, which are questions pertaining to the organization of the course itself, vice questions regarding the benefit of the course to the student and his or her organization, shows no significant change in the student's satisfaction rates. The overall satisfaction rate in two of the three course categories: Distance learning (DL) and resident drop by a one hundredth to two hundredth points in the student satisfaction rate. DL drops from a 4.32 average to a 4.3 average satisfaction rate. The resident courses drop to an average of 4.63 from their previous score of 4.65. The JSOU-EA course category was the only course grouping where the numbers stay consistent with or without questions 1 and 2. The JSOU-EA average course rating remained a 4.53 with DL and the resident courses having the most iterations and students. The drop in student satisfaction ratings with questions 1 and 2 excluded brings the total JSOU student average down to 4.62 from 4.64. Overall, it

appears that excluding questions 1 and 2 when computing the overall satisfaction rate have an insignificant impact on students' scoring of their satisfaction with the course he or she had just completed.

Table 5. *JSOU Academic Year 2018 Level 1 Survey Results Without Questions 1 and 2*

Row Labels	Iterations	Students	L1Q3-ContentExp	L1Q4-Useful	L1Q5-Rec	L1Q6-Satisfaction	Avg
DL	3	4084	4.26	4.36	4.29	4.30	4.30
Introduction to Irregular Warfare Distance Learning Course	1	432	4.11	4.20	4.15	4.15	4.15
Introduction to Special Operations Forces (Fully Online)	1	2982	4.46	4.51	4.50	4.51	4.50
Joint Special Operations Task Force	1	670	4.20	4.36	4.23	4.23	4.26
JSOU-EA	14	870	4.38	4.54	4.66	4.56	4.53
Enterprise Management Course	4	310	4.39	4.58	4.62	4.57	4.54
Joint Fundamentals Course	4	328	4.21	4.36	4.42	4.26	4.31
Joint Special Operations Forces Senior Enlisted Academy	4	211	4.37	4.58	4.78	4.66	4.60
Summit	2	21	4.72	4.72	4.96	4.96	4.84
Resident	204	4008	4.53	4.59	4.72	4.69	4.63
Advanced Special Operations Combating Terrorism Course	3	64	4.40	4.51	4.67	4.77	4.59
Asymmetric Warfare Course	3	101	4.01	4.14	4.06	4.19	4.10
Combined/ Joint Force Special Operations Component Commander's Course	1	27	4.67	4.88	4.92	4.83	4.83
Countering Terrorism Executive Interagency Seminar	2	30	4.63	4.51	4.81	4.80	4.69
Countering Terrorist Networks Interagency Seminar	2	41	4.30	4.38	4.67	4.59	4.48
Countering Violent Extremism	6	124	4.52	4.60	4.71	4.67	4.62
Countering Weapons of Mass Destruction Foundations Course	3	52	4.47	4.39	4.65	4.67	4.54
Counter-Proliferation Opportunity Design	2	13	4.45	4.45	4.55	4.65	4.53
Covert Action and SOF Sensitive Activities	5	55	4.76	4.66	4.91	4.85	4.80
Cultural Analysis in Special Operations	6	71	4.76	4.84	4.87	4.82	4.82
Cyber and Special Operations Intelligence	2	28	4.14	4.33	4.44	4.29	4.30
Design Thinking for Practitioners	2	23	4.83	4.83	4.80	4.81	4.82
Employment of Special Operations	3	22	4.60	4.80	4.73	4.77	4.72
Evolution of US SOF	2	11	4.32	4.22	4.68	4.61	4.46
Influence in Special Operations Course	3	35	4.54	4.65	4.78	4.75	4.68
Information Related Capabilities Seminar	1	15	3.89	3.11	4.22	4.33	3.89
Inter-Ministerial Collaboration Course	3	62	4.55	4.51	4.77	4.70	4.63
International and Interagency Special Operations	4	35	4.79	4.81	4.90	4.94	4.86
International Mid-Level Leader Course	1	7	4.71	4.71	5.00	5.00	4.86
International Special Operations Noncommissioned Officer Integration Course	7	125	4.37	4.47	4.76	4.65	4.56
International Summit Course	2	16	4.75	4.88	4.94	4.94	4.88
Introduction to Design Thinking	9	149	4.65	4.73	4.82	4.78	4.75
Introduction to Special Operations Acquisition Course	2	53	4.25	4.53	4.48	4.41	4.42
Irregular Warfare Course	3	49	4.71	4.82	4.85	4.84	4.80
Joint Civil-Military Operations Campaign Planning Workshop	2	41	4.50	4.78	4.70	4.62	4.65
Joint Special Operations Forces Pre-Command Course	3	114	4.44	4.63	4.70	4.68	4.62
Joint Special Operations Medical Orientation Course	2	48	4.85	4.85	4.90	4.87	4.87
Joint Special Operations Public Affairs Course	1	25	4.74	4.79	4.95	4.82	4.83
JSOAC Joint Operations Center	4	84	4.42	4.45	4.62	4.59	4.52
Maritime Operational Planning Course	2	49	4.55	4.63	4.77	4.72	4.66
MARSOF Logistics Course	2	40	4.62	4.43	4.76	4.65	4.62
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Operational Planning Course	8	274	4.53	4.55	4.70	4.59	4.59
Preparation of the Environment Orientation Course	4	55	4.67	4.85	4.87	4.87	4.81
Principles of Resistance in Modern Warfare	2	64	4.44	4.29	4.51	4.50	4.43
SOF Chaplain Spiritual Readiness Course	1	5	5.00	5.00	5.00	5.00	5.00
SOF Creative Problem Solving-Advanced	9	155	4.81	4.77	4.88	4.91	4.84
SOF Creative Problem Solving-Executive	4	29	4.70	4.67	4.81	4.72	4.73
SOF Design & Innovation 4-Day Inquiry Course	1	16	4.67	4.80	4.93	4.73	4.78
SOF Resource Management Course	1	21	4.32	4.68	4.73	4.55	4.57
SOF Sensitive Activities Foundations Course	1	13	3.54	4.31	3.92	3.92	3.92
SOLO Orientation	1	13	4.57	4.86	4.86	4.86	4.79
Special Operations Air Integration Course	5	80	4.37	4.29	4.68	4.54	4.47
Special Operations Aviation Planning Course	8	187	4.36	4.43	4.63	4.56	4.49
Special Operations Chaplaincy Scope of Practice	1	4	4.00	4.50	4.75	4.75	4.50
Special Operations Combating Terrorism Course	5	88	4.47	4.61	4.75	4.66	4.62
Special Operations Forces Integration Course	4	90	4.46	4.42	4.63	4.60	4.53
Special Operations Forces Interagency Collaboration Course	5	76	4.42	4.46	4.61	4.69	4.54
Special Operations Forces Security Cooperation Course	9	249	4.58	4.57	4.76	4.74	4.66
Special Operations Intelligence Course	3	34	4.30	4.61	4.73	4.58	4.56
Special Operations Planning Course	10	238	4.57	4.61	4.74	4.72	4.66
Special Operations Religious Support Team Orientation	2	61	3.77	4.35	4.17	4.01	4.07
Strategic Utility of Special Operations	2	13	4.59	4.88	4.88	4.88	4.80
Theater Special Operations Command Staff Education Course	9	258	4.51	4.46	4.60	4.66	4.56
TSOC Staff Preparation Course	3	36	4.43	4.61	4.61	4.65	4.58
USSOCOM Staff Education Program - Foundations	8	249	4.57	4.63	4.70	4.71	4.65
USSOCOM Staff Education Program - National	1	7	5.00	5.00	4.86	4.71	4.89
Grand Total	221	8962	4.51	4.58	4.71	4.68	4.62

In the next diagram, JSOU's Level 1 surveys average from questions three through six are compared via a scatter plot diagram to the mean average of JSOU's AY

2018 level 3 surveys, which use the same one to five Likert scale to determine if there is any correlation. JSOU surveyed 36 of the 64 courses it offered in AY 2018. Thirty-five of those courses surveyed had graduates respond with one course having no graduates respond. The courses that had no data from the Level 3 survey were excluded from this analysis. The Level 3 data is far less abundant than the Level 1 survey data for JSOU. Not all the courses had students respond to JSOU's survey requests. Only 278 graduates responded from the 3281 surveys JSOU sent out. This response rate is only 9%, which is far lower than the 79.9% response rate for JSOU's Level 1 survey. This low response rate reinforces the finding mentioned during the literature review wherein a 2014 study titled "Training Professionals' Usage and Understanding of Kirkpatrick's Level 3 and Level 4 Evaluations," instructors cited the difficulty in attaining Level 3 data due myriad reasons, including a lack of interest by leadership and respondents as well as the lack of time and resources to conduct more in-depth evaluations beyond Level 1 reactions (Kennedy, et al., 2014). The university did not send Level 3 surveys to graduates from all its courses due to resource constraints. JSOU focused its Level 3 survey efforts on courses that instructors of those courses had expressed the most interest in analyzing the survey returns in hopes of improving their respective course, but even here, where the instructors were motivated to attain the data, the graduates were not motivated to provide it.

The statistical reliability of the Level 3 data is less than ideal, and experts vary on what constitutes a statistically valid sample size. Dr. Hill states, "if the methodology attracts large amounts of qualitative information, as is the case with ideographic techniques such as interview, case study or repertory test, then practical constraints may

mean that the researcher needs to settle for a small sample size. In these circumstances the argument goes that it is better to have collected some data, to have gained some information and to have done some research, than to have collected no data gained no information and to have conducted no research" (Hill, 1998).

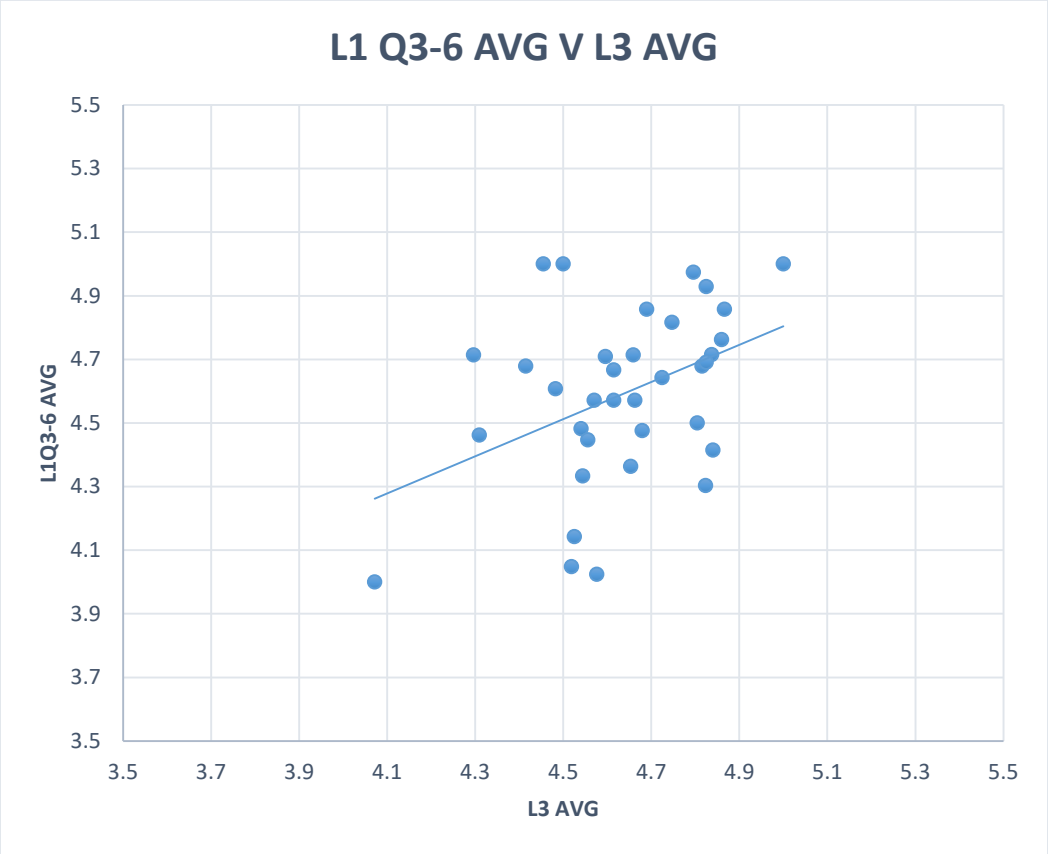


Figure 11. *Scatterplot of Level 1 Questions 3-6 Average Verses Level 3 Average*

The scatterplot diagram above shows a slightly positive correlation between the two surveys. This correlation is reconfirmed when a Pearson *r* correlation analysis is applied to the same data, and the resultant answer shows a positive number of .4105.

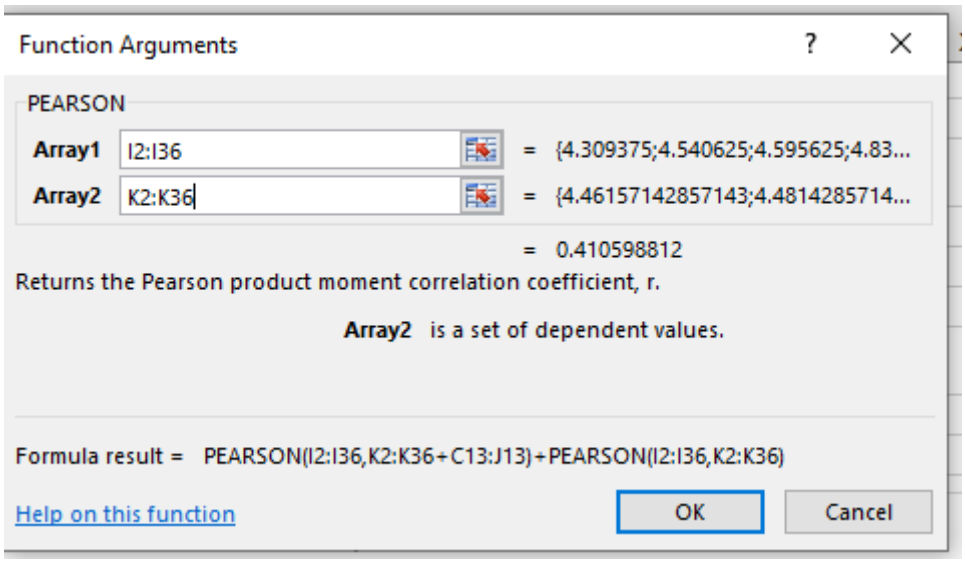


Figure 12. *Excel Screen Snapshot of Correlation Analysis*

Narrowing down the focus of the data to strictly question 4 of the Level 1 surveys, which refer to the student's opinion of the applicability of the course to the student's job, and comparing that question to the Level 3 question 4, which asks the graduate if he or she have applied what they learned in the course on the job, reveals the following via a scatter plot diagram.

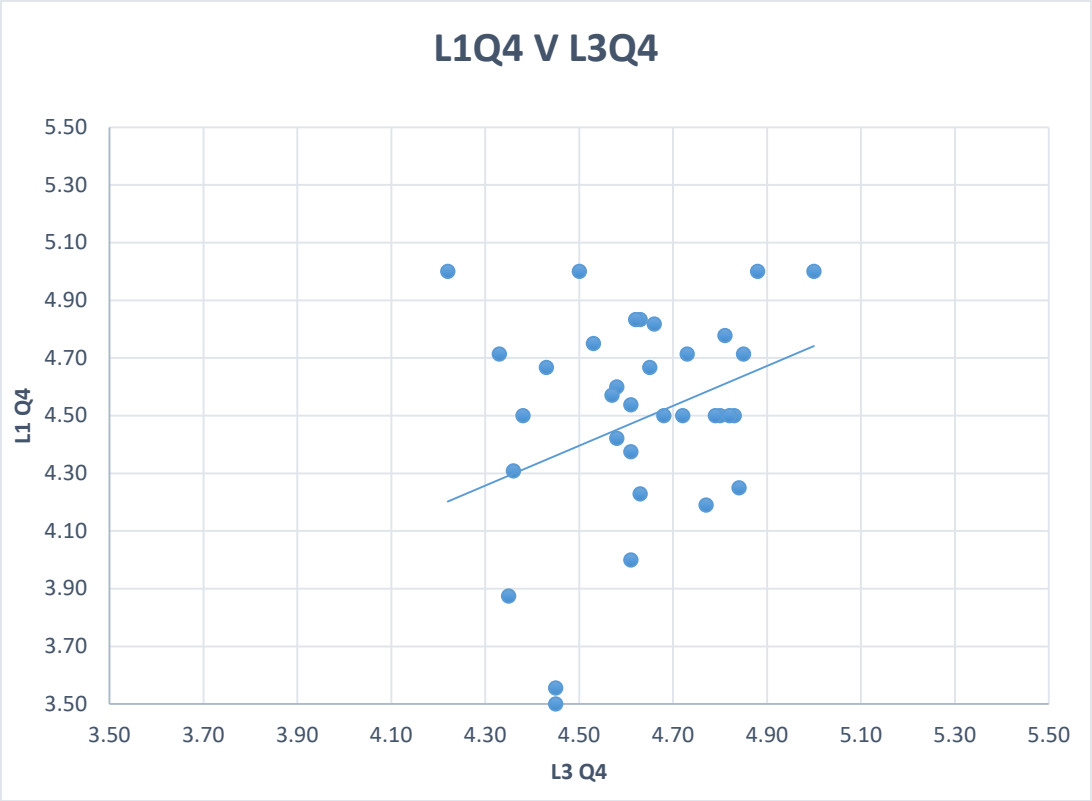


Figure 13. *Scatterplot of Level 1 Question 4 Verse Level 3 Question 4*

This scatter plot diagram shows a similar correlation to the earlier diagram that included questions three through six of the Level 1 survey and an average of all of the questions in the Level 3 survey. Visually, this diagram shows that by isolating the two questions there is no discernible correlation difference if Level 1 question four and Level 3 question four are isolated, which is contrary to the author's initial presumption that if students after having taken a course believe the course will be useful in their job will attest months later at a higher rate when back at their job they are actually using the skills they gained from their JSOU course.

In summary, the Level 1 data shows that JSOU courses are well received by the students with an overall high satisfaction rate. When comparing JSOU's Level 1 data with the limited JSOU Level 3 data that is available, there is clearly a slight but

discernible positive correlation between students' Level 1 reaction to JSOU courses and their satisfaction with having taken a JSOU course after they have returned to their respective jobs. When isolating question four from the Level 1 survey regarding student's expectation of the usefulness of the course to their job and the Level 3 question four regarding the applicability of the course the student took to his or her job the correlation when viewed via scatterplot diagram is approximately the same or slightly less than the overall correlation between Levels 1 and 3.

Level 2: Learning

Kirkpatrick's Level 2 is where one ascertains whether the desired learning objectives for the course were met. Kirkpatrick argues that for this level there must be an assessment to measure what degree students acquired the knowledge, skills and attitude that was intended to be gained during the course. There are no survey results for this level because it is analyzed within JSOU through an internal organizational audit. JSOU's Curriculum Management Operating Instruction 36-1 in effect for AY 2018 dated May 2017 mandates that all courses must have some sort of assessment that measures whether students met the course's desired learning objectives (JSOU, 2017b). JSOU audits each course annually via a CRC review, and one of the items discussed in every course review is the sufficiency of the course assessment(s) measuring desired learning objectives. A review of all of JSOU's CRC AY 2018 meeting minutes for was conducted to ascertain JSOU's commitment to ensuring JSOU courses incorporate a formative evaluation that accurately reflects knowledge and skills gained by the student during the course of instruction. JSOU leadership places great emphasis on a concept known as backward design that the curriculum design team follows for each new course.

This same concept is reinforced during preparation for the CRC meetings where board members are encouraged to review JSOU curriculum guidelines prior to each meeting. Backward design, also known as backward planning or backward mapping, is a process that JSOU's instructional designers and instructors of record use to design learning experiences and instructional techniques to achieve specific learning goals. Backward design begins with the objectives of the course—what students are expected to learn and be able to do—and then proceeds "backward" to create lessons that achieve those desired goals. In most courses, the goals are determined during the initial design of the course, which JSOU refers to as a curriculum workshop—i.e., concise, written descriptions of what students are expected to know and be able to do at the completion of the course to meet measures of performance.

The basic rationale motivating backward design is that starting with the end goal, rather than starting with the first lesson chronologically delivered during the course, helps JSOU design a sequence of lessons, problems, projects, presentations, assignments and assessments that result in students achieving the academic goals of a course or unit—that is, actually learning what they were expected to learn. JSOU's emphasis on the Kirkpatrick Model coupled with their adherence to backward design results in a begin with the end in mind mindset that is described in JSOU's 2018 Faculty and Staff Handbook (Appendix F), which the CRC board members are encouraged to review prior to each CRC meeting.

Voting members for each CRC are as follows: all four JSOU department heads (CSO, CCE, Academic Affairs and JSOU-EA) or their designated representative, a Faculty Advisory Board representative, JSOU's senior enlisted advisor and the JSOU

curriculum manager. Additional non-voting members present for each CRC meeting may include an instructional systems designer, assessment specialist, and institutional research analyst. The dean of academics is the committee chair. All CRC minutes are staffed through the voting members for review and then sent to the JSOU president for final concurrence/non-concurrence. If the president non-concurred on a recommendation from the CRC, it is noted in his or her handwritten notes on the final CRC minutes. Those minutes are then electronically scanned and made available to all JSOU staff via an internal electronic database. The president's decision on all CRC matters is deemed final regardless of whether he or she agreed or disagreed with the CRC recommendation.

In AY 2018, JSOU held 14 CRC meetings where all of JSOU's 61 fully approved courses were reviewed for academic sufficiency. Of the 61 courses that went before the CRC, three courses were found to be lacking in academic sufficiency and were given only conditional approval due to significant discrepancies in their adherence to the JSOU academic standards. All three conditionally approved courses were later approved by a supplemental CRC review later in the AY after they had corrected the deficiencies noted by the CRC. All three courses initially had issues with adequately defining the desired outcomes for the course, which subsequently led to not being able to accurately assess what was learned in class.

In total, 22 courses, to include the three conditionally approved, were found to have some sort of assessment issue that was of concern to the committee. Table 6 below outlines the assessment issues found by the CRC in AY 2018. The researcher was unable to analyze the Level 2 data in relation to a possible correlation between issues found at

Level 2 and the Level 1 and 3 findings because the CRC minutes were not sufficiently detailed for that level of analysis.

Table 6. *Level 2 Review of Curriculum Review Committee Minutes*

Clerical issues regarding syllabus outlining assessment for the course	2
No grading rubric	1
Inadequate assessment for desired outcomes	2
Participation grade weighted more than 10%	1
Learning objectives for the course did not align with the test	3
Possible grade inflation. Too many high grades	1
Students who attended were not the desired target audience	4
High withdrawal rate	1
No assessment for course	3
High failure rate	2
The assessment did not use up to date scenario	1
Assessment issue mentioned but not specified	1

All 61 courses were eventually approved by the CRC through either a supplemental meeting or through certification by the JSOU curriculum manager that the

assessment deficiencies noted by the CRC review were rectified. Thirty six of the 61 courses reviewed by the CRC also had Level 3 data available for review.

Of the 36 courses that also had Level 3 data available, 13 courses had assessment issues that needed to be addressed. This is equal proportion wise (36%) to the overall 22 of 61 courses that had assessment issues.

The three courses identified as having no assessment were three senior-level continuing education courses that the CRC, in a supplemental review, deemed the instructor could certify the executive students had met the desired learning objective through attendance and engagement during class. Linda Suskie notes in her book, *Assessing Student Learning*, that all assessments are inherently subjective and qualitative such as an instructor's determination that a student met the course's desired objectives via observation by the instructor are underused and not appreciated for its usefulness in discovering problems that might not be found through a traditional quantitative assessment (Suskie, 2009).

The question of whether the students attending the course were from the desired target audience, as noted in the course description, was a recurring discussion through many of the JSOU CRC minutes. Target audiences are defined early in the curriculum development process when the course is being designed by asking the following three questions: Who are you teaching? What is their background? Will some need more instruction than others? The target audience description does not need to be extensive but should be specific such as this course is intended for senior officers that have been selected for squadron level command (Effective Adult Learning A Toolkit for Teaching Adults, 2014).

Four of the courses reviewed by the JSOU CRC highlighted a concern with the target audience through the assessment portion where it was noted that students attending the course might not have had the desired career background or operational experiences needed to adequately complete the assessment for the course. This CRC concern is reinforced by data from JSOU's AY 2018 Factbook, which shows that over one-fourth of students that took a course with JSOU were not part of the desired target audience. These students were identified as non-SOF, which is defined by JSOU as "a person whose skill function or specialty is not essential to the successful conduct of a special operations course objective" (JSOU, 2018, p. 30).

JSOU's CRC process is not unique within DOD. A review of other DOD schools shows an equal emphasis on insisting assessments are tied to desired learning outcomes. The Defense Institute for Security Cooperation Studies (DISCS) has a similar CRC process. DISCS is accredited by the Council on Occupational Education, which is an accrediting body with a comparable mission to JSOU's accrediting body (ACCET). DISCS's minutes show that the institute places emphasis on the course assessment being tied to the course's desired learning outcomes, like JSOU. The main difference, though, is that DISCS invites stakeholders to attend the curriculum reviews where they are given the opportunity to attest as to whether or not the courses DISCS is providing are meeting the needs of the customer (Defense Institute for Security Cooperation Studies, 2019). Inviting stakeholders to attend the curriculum reviews is an idea JSOU should explore and would align well with Kirkpatrick's Level 4 assessment concept of seeking feedback from supervisors and leadership.

The Joint Forces Staff College (JFSC), which is a college within the National

Defense University (a graduate-level regionally accredited university), is another DOD school that places a curriculum review requirement on tying assessment to desired learning outcomes. JFSC conducts a midterm program review for every JFSC course once every three years. JFSC requires that documentation provided to the reviewers must have an assessment plan. This plan must develop direct and indirect assessments that ensure assessments are linked to course and program learning objectives (LOs). Assessments must provide evidence that LOs have been achieved (Joint Forces Staff College, 2019). JSOU does this but it relies on in house expertise to certify that the outcomes have been achieved. This is akin to asking a pilot to certify himself as having passed his check ride. JSOU should consider modifying this mandate to include requiring that evidence be provided from SMEs currently in the field (the actual end-user of the product) that the learning objectives have been achieved. This initiative would ensure the course maintains currency and clearly align with Kirkpatrick's Level 2 that emphasizes the idea of not only assessing students but ensuring the assessment is in line with desired course outcomes.

Level 3: Behavior

This level is where Kirkpatrick advocates for some sort of measure to ascertain whether the graduates' behavior on the job has changed as a result of having taken the course. The data becomes less prevalent and often harder to obtain, as evidenced by JSOU's survey return rates. Only 278 graduates responded to the survey request out of 3,151 survey requests sent for a return rate of 9%.

Table 7. *Level 3 Survey Results by Course*

	For AY 18		
Course by Survey Type	Responses	Invites	Rate
L3	**278**	**3151**	**9%**
Enlisted Academy - Joint Fundamentals Course	14	327	4%
Enlisted Academy - Enterprise Management Course	19	310	6%
Enlisted Academy - Joint Special Operations Forces Senior Enlisted Academy	25	210	12%
Enlisted Academy - Summit	4	21	19%
Chaplain Spiritual Readiness Course	2	5	40%
Combating Terrorist Networks Interagency Seminar	4	41	10%
Combined/Joint Force Special Operations Component Commanders	2	27	7%
Countering Weapons of Mass Destruction Foundations Course	3	52	6%
Counter-Proliferation Opportunity Design	3	13	23%
Covert Action and SOF Sensitive Activities (renamed SOF Sensitive Activities in the Contempora	12	51	24%
Cultural Analysis in Special Operations	8	52	15%
Cyber and Special Operations Intelligence (renamed Cyberspace and Special Operations Forces)	8	29	28%
Design Thinking for Practitioners (renamed SOF Design and Innovation Advanced Course)	4	23	17%
Employment of Special Operations	3	22	14%
Evolution of U.S. Special Operations Forces	1	11	9%
Influence in Special Operations Course	3	37	8%
International and Interagency Special Operations	9	32	28%
Introduction to Design Thinking (renamed SOF Design and Innovation Basic Course)	7	121	6%
Introduction to Special Operations Acquisitions Course	4	54	7%
Irregular Warfare Course	6	49	12%
Joint Special Operations Forces Pre-Command Course	6	114	5%
Joint Special Operations Medical Orientation Course	7	48	15%
Joint Special Operations Public Affairs Course	6	25	24%
JSOAC Joint Operations Center	10	56	18%
MARSOF Logistics Course	3	21	14%
Non-Standard Logistics Course	6	88	7%
SOF Creative Problem Solving	21	123	17%
SOF Resource Management Course	2	21	10%
Special Operations Chaplaincy Scope of Practice	1	4	25%
Special Operations Forces Interagency Collaboration Course	None	71	
Special Operations Forces-Security Cooperation	7	249	3%
Special Operations Intelligence Course	8	37	22%
Special Operations Planning Course	13	238	5%
Special Operations Religious Support Team Orientation	8	59	14%
Theater Special Operations Command Staff Education Course	6	260	2%
USSOCOM Staff Education Program - Foundations	33	250	13%

This low return rate can be problematic but the National Survey of Student Engagement (NSSE) from Indiana University states on their website, "even relatively low response rates provided reliable institution-level estimates, albeit with greater sampling error and less ability to detect statistically significant differences with comparison institutions" (National Survey of Student Engagement, 2020). Ideally, a greater response rate would have given the quantitative analysis of the Level 3 data more credibility, but the response rate, though not ideal, is all that JSOU collected in 2018, and 278 Level 3

survey responses is still a significant amount of data that should be analyzed. Only those courses which had responses for both Level 1 and Level 3 surveys were used to test the null hypothesis.

The null hypothesis for the correlation between the Level 1 survey question and the Level 3 survey question is as follows:

> *Null Hypothesis*: There is no correlation between the Level 1 question regarding usefulness of the course taken to the student's job and the Level 3 survey question pertaining to the student's assessment of the course as being useful to his or her job three to six months after having returned to his or her job.

In addition to the Pearson *r,* as stated earlier, a scatter plot diagram was run of the mean averages of the Level 1 and Level 3 survey questions to see if a visual portrayal of the data would show similar results or not, thus acting as a cross-check for the Pearson *r* test on correlation. Both types of analyses were run in Microsoft Office's Excel program. The results are as follows:

The Pearson *r* for this correlation was (.3086), which is a positive correlation yet actually slightly less than the correlation test run, where the average of all of Level 1 questions three through six were compared to Level 3's overall average (.4105). The Pearson *r* is calculated by using the following formula in Excel with the data from the table on the next page. The reason for the drop in correlation when comparing only questions four from both surveys is because two courses (Countering Weapons of Mass Destruction Foundations Course and Counter-Proliferation Opportunity Design Course) had nearly a full point drop in their Level 3 satisfaction response to question four regarding usefulness on the job. This drop may point to a target audience problem

regarding who is attending the course and whether the graduates were in jobs that gave the graduate the opportunity to apply what he or she learned. This is something that requires further analysis and is an example of how utilizing the Kirkpatrick Model can provide useful feedback that helps an organization evaluate the effectiveness of their program.

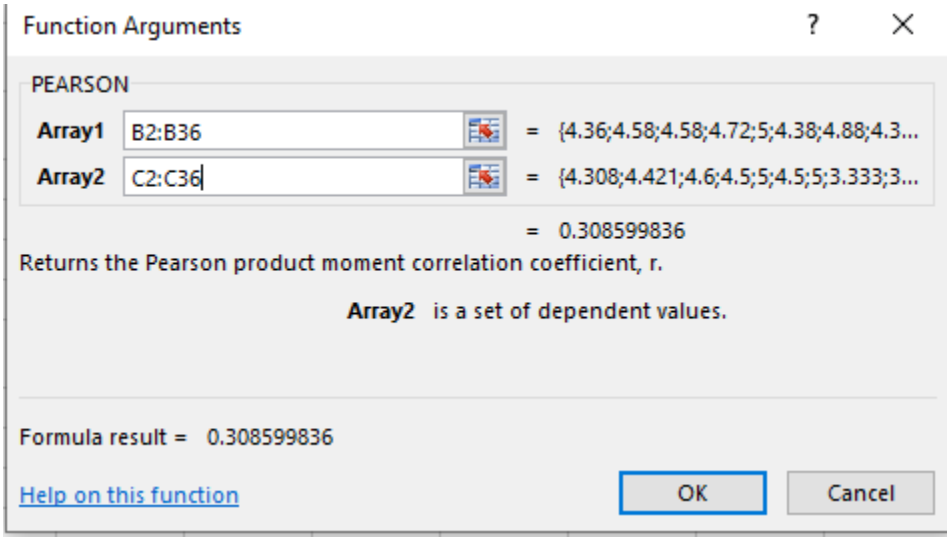


Figure 14. *Excel Calculation for Pearson r*

As stated earlier in Chapter 3, *r* is the actual correlation with the number ranging from negative one to one with a number close to zero indicating a very weak or nonexistent relationship between the two questions from the Level 1 and Level 3 surveys.

Table 8. *Level 1 Survey Questions 3 and 4 Data*

AY18 Course and Overall L3 Mean	(L1 Q4) The information provided in the course will be useful to me in my job.	(L3 Q4d) This educational experience has been useful to you in your job.
Enlisted Academy - Joint Fundamentals Course	4.36	4.31
Enlisted Academy - Enterprise Management Course	4.58	4.42
Enlisted Academy - Joint Special Operations Forces Senior Enlisted Academy	4.58	4.60
Enlisted Academy - Summit	4.72	4.50
Chaplain Spiritual Readiness Course	5.00	5.00
Combating Terrorist Networks Interagency Seminar	4.38	4.50
Combined/Joint Force Special Operations Component Commanders Course	4.88	5.00
Countering Weapons of Mass Destruction Foundations Course	4.39	3.33
Counter-Proliferation Opportunity Design	4.45	3.50
Covert Action and SOF Sensitive Activities (renamed SOF Sensitive Activities in the Contemporary Security Environment)	4.66	4.82
Cultural Analysis in Special Operations	4.84	4.25
Cyber and Special Operations Intelligence (renamed Cyberspace and Special Operations Forces)	4.33	4.71
Design Thinking for Practitioners (renamed SOF Design and Innovation Advanced Course)	4.83	4.50
Employment of Special Operations	4.80	4.50
Evolution of U.S. Special Operations Forces	4.22	5.00
Influence in Special Operations Course	4.65	4.67
International and Interagency Special Operations	4.81	4.78
Introduction to Design Thinking (renamed SOF Design and Innovation Basic Course)	4.73	4.71
Introduction to Special Operations Acquisitions Course	4.53	4.75
Irregular Warfare Course	4.82	4.50
Joint Special Operations Forces Pre-Command Course	4.63	4.83
Joint Special Operations Medical Orientation Course	4.85	4.71
Joint Special Operations Public Affairs Course	4.79	4.50
JSOAC Joint Operations Center	4.45	3.56
MARSOF Logistics Course	4.43	4.67
Non-Standard Logistics Course	4.62	4.83
SOF Creative Problem Solving	4.77	4.19
SOF Resource Management Course	4.68	4.50
Special Operations Chaplaincy Scope of Practice	4.50	5.00
Special Operations Forces-Security Cooperation	4.57	4.57
Special Operations Intelligence Course	4.61	4.38
Special Operations Planning Course	4.61	4.54
Special Operations Religious Support Team Orientation	4.35	3.88
Theater Special Operations Command Staff Education Course	4.46	4.00
USSOCOM Staff Education Program - Foundations	4.63	4.23
Average	4.61	4.42

The scatter plot diagram from Figure 13, using the same data, also visually reconfirms what the Pearson formula shows that yes, there is a slightly positive Correlation.

In this case the *Null Hypothesis*: There is no correlation between the Level 1 question regarding usefulness of the course taken to the student's job and the Level

3 survey question pertaining to the student's assessment of the course as being useful to his or her job three to six months after having returned to his or her job is rejected because there is an observable correlation in the form of a scatter plot diagram and slightly positive Pearson *r* result indicating that the alternative hypothesis of some correlation existing should be accepted.

The Level 3 data in its entirety (see next page) shows graduates viewed the course they had taken at JSOU as having been worthwhile and worth their organization's time and effort to send them to the course. As stated earlier, the return rate was only 9%, and not all courses were surveyed at this level, but as Robin Hill advocated in her article, some data is better than no data. All areas of the Level 3 survey, when averaged, showed a favorable rating of above a 4.0 on a Likert scale with the mean for all courses surveyed being 4.59. There were a few courses that scored below 4.0 in some areas, which is an indicator of a course that is below the JSOU norm and requires further scrutiny that is beyond the scope of this study.

Table 9. *Level 3 Data*

Course and Overall L3 Mean	The course increased your knowledge of the subject matter.	The course has improved your ability to meet future challenges.	The course prepared you to interact more effectively with other organizations /agencies.	This educational experience has been useful to you in your job.	The organizational investment to send you to this course was worthwhile.	You were satisfied with the course.	You would recommend the course to others.	Count	Avg score
Enlisted Academy - Joint Fundamentals Course	4.62	4.39	4.39	4.31	4.39	4.54	4.62	13	4.46
Enlisted Academy - Enterprise Management Course	4.63	4.47	4.32	4.42	4.47	4.42	4.63	19	4.48
Enlisted Academy - Joint Special Operations Forces Senior Enlisted Academy	4.80	4.64	4.68	4.60	4.68	4.72	4.84	25	4.71
Enlisted Academy - Summit	4.75	4.75	4.75	4.50	4.75	4.75	4.75	4	4.71
Chaplain Spiritual Readiness Course	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**2**	5.00
Combating Terrorist Networks Interagency Seminar	4.75	4.50	4.50	4.50	4.75	4.50	4.75	4	4.61
Combined/Joint Force Special Operations Component Commanders Course	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	4.50	**5.00**	**2**	4.93
Countering Weapons of Mass Destruction Foundations Course	**5.00**	4.33	4.00	3.33	4.00	4.67	**5.00**	**3**	4.33
Counter-Proliferation Opportunity Design	4.50	3.50	4.50	3.50	4.00	4.50	4.50	2	4.14
Covert Action and SOF Sensitive Activities (renamed SOF Sensitive Activities in the Contemporary Security Environment)	**5.00**	**5.00**	**5.00**	4.82	**5.00**	**5.00**	**5.00**	**11**	4.97
Cultural Analysis in Special Operations	4.25	4.13	4.13	4.25	4.38	4.50	4.50	8	4.30
Cyber and Special Operations Intelligence (renamed Cyberspace and Special Operations Forces)	4.86	4.57	4.57	4.71	4.86	4.71	4.71	7	4.71
Design Thinking for Practitioners (renamed SOF Design and Innovation Advanced Course)	**5.00**	4.75	4.25	4.50	4.75	4.75	4.75	**4**	4.68
Employment of Special Operations	4.50	4.50	4.50	4.50	4.50	**5.00**	**5.00**	2	4.64
Evolution of U.S. Special Operations Forces	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**1**	5.00
Influence in Special Operations Course	4.67	4.67	4.67	4.67	4.33	4.00	4.33	3	4.48
International and Interagency Special Operations	4.67	4.78	4.67	4.78	4.78	4.67	**5.00**	9	4.76
Introduction to Design Thinking (renamed SOF Design and Innovation Basic Course)	**5.00**	4.71	4.71	4.71	4.71	**5.00**	4.86	**7**	4.82
Introduction to Special Operations Acquisitions Course	4.75	4.50	4.75	4.75	4.50	4.75	4.75	4	4.68
Irregular Warfare Course	4.50	4.33	4.50	4.50	4.67	4.50	4.50	6	4.50
Joint Special Operations Forces Pre-Command Course	4.50	4.50	4.50	4.83	4.83	4.67	4.83	6	4.67
Joint Special Operations Medical Orientation Course	4.86	4.71	4.86	4.71	4.86	**5.00**	**5.00**	7	4.86
Joint Special Operations Public Affairs Course	4.67	4.67	4.67	4.50	4.83	4.67	4.83	6	4.69
JSOAC Joint Operations Center	4.56	4.00	3.78	3.56	4.22	4.11	4.11	9	4.05
MARSOF Logistics Course	4.33	4.67	4.00	4.67	4.67	4.67	**5.00**	3	4.57
Non-Standard Logistics Course	4.83	4.67	**5.00**	4.83	**5.00**	4.67	**5.00**	6	4.86
SOF Creative Problem Solving	4.52	4.52	4.24	4.19	4.38	4.52	4.52	21	4.42
SOF Resource Management Course	4.50	4.50	4.50	4.50	**5.00**	4.50	4.50	2	4.57
Special Operations Chaplaincy Scope of Practice	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**1**	5.00
Special Operations Forces-Security Cooperation	4.71	4.57	4.43	4.57	4.43	4.71	4.57	7	4.57
Special Operations Intelligence Course	4.50	4.50	4.25	4.38	4.50	4.50	4.50	8	4.45
Special Operations Planning Course	4.85	4.77	4.54	4.54	4.69	4.77	4.85	13	4.71
Special Operations Religious Support Team Orientation	4.13	4.00	4.13	3.88	4.00	3.63	4.25	8	4.00
Theater Special Operations Command Staff Preparation Course	3.83	3.67	4.17	4.00	4.00	4.17	4.33	6	4.02
USSOCOM Staff Education Program - Foundations	4.54	4.14	4.14	4.23	4.51	4.43	4.54	35	4.36
Total	**4.64**	**4.48**	**4.44**	**4.42**	**4.57**	**4.57**	**4.68**	**278**	4.59

Regarding the qualitative aspect of analyzing JSOU's Level 3 data, a word tag cloud was created to allow one to quickly visually perceive the most common terms used by survey respondents to determine its relative prominence. When used with other forms of analysis, "word clouds can be a useful research tool to aid educational research. We have demonstrated that they can allow researchers to quickly visualize some general patterns in text. In the research setting, these texts are likely to be informants' spoken (transcribed) and written responses. The visualization allows researchers to grasp the

common themes in the text and sometimes even to find out the main differences between sets of responses" (Mcnaught & Lam, 2010, p. 641).

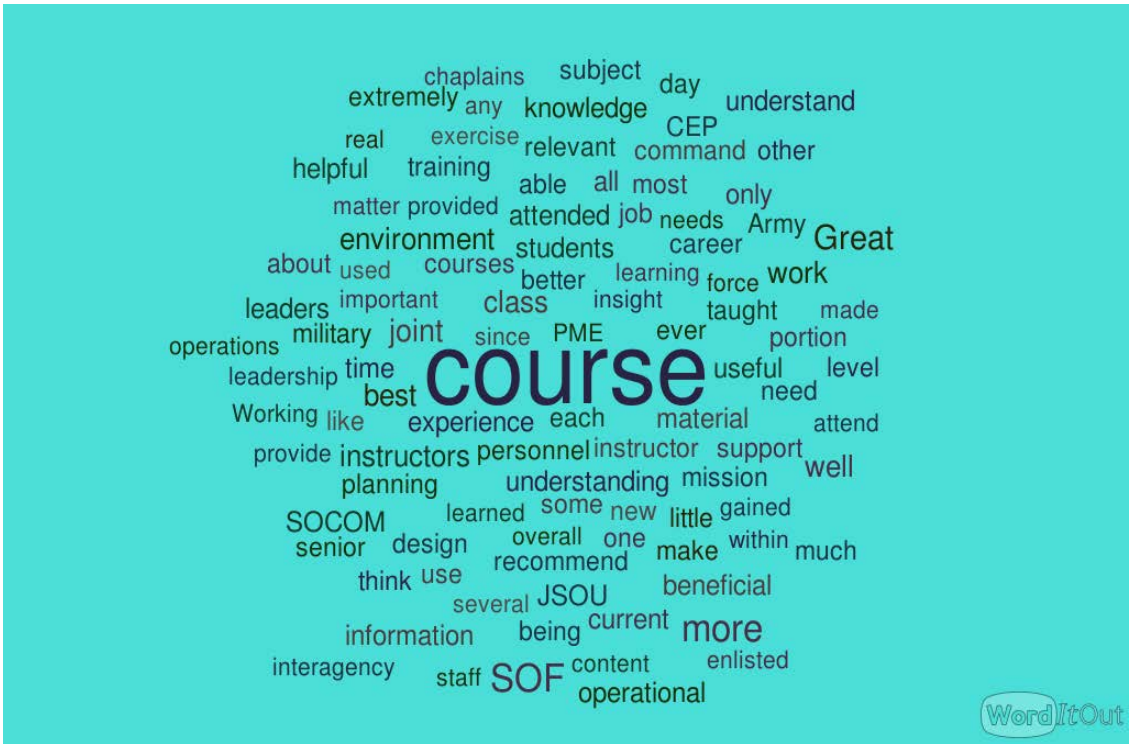


Figure 15. Level 3 Qualitative Survey Results Word Tag Cloud

The word "course" took center stage since almost every student wrote the word when writing their general comments about the course he or she had taken. Eliminating the word "course" from the word cloud shows that other prominent words were positive words such as great, recommend, useful, best, beneficial, understanding, etc. This is in line with the author's reading of the comments. The majority of comments from the Level 3 respondents were laudatory in their description of the courses the students took at JSOU. The author noted that respondents who took the chaplains course were extremely effusive in their praise of the course they had taken. There were some recommendations on possible ways to make a specific course even better, but not a single respondent stated the course he or she had taken was not worth attending. The usage of the word cloud,

coupled with the author's reading of the general comments, was as McNaught and Lam (2010) summarized a useful tool in discerning generalized trends in the comments provided by respondents.

Level 4: Results

The last and most difficult level of evaluating the effectiveness of training, according to Kirkpatrick (2018), is results. This is where organizations are looking for evidence that the training provided is resulting in the intended impact. JSOU had virtually no information in AY 2018 that was specifically intended to answer this question. JSOU did, however, conduct multiple interviews and surveys of senior leaders in November of 2018. Just two months after JSOU's AY 2018 ended, a survey was sent out to USSOCOM senior leadership. The intent of the survey was not specifically designed as a Kirkpatrick Level 4 survey, rather, it was to gather insight from senior leaders that would be useful in creating a revised strategic plan for JSOU. The survey, though, has parts that can be used to answer Kirkpatrick's Level 4 focus on stakeholder input regarding the efficacy of a training and education program. The survey questions focused on JSOU as a whole entity vice a specific course. The questions ranged from JSOU's past performance to asking senior leaders what educational gaps JSOU could fill, to the future of JSOU. For JSOU, this effort was a significant act of engagement with its key customer base. Not only did it give JSOU valuable information, but it also informed USSOCOM leadership that JSOU was actively seeking feedback. JSOU reaching out to SOF leaders is a classic example in systems theory of an open system using feedback to maintain alignment and relevance while leaning forward to address future challenges. This effort provided JSOU a general overview of how JSOU is perceived, how well the

senior leadership community knows what JSOU offers and pointed to areas that need improvement. It confirmed that leaders are more focused on operational knowledge and professional development than other possible motivations. Lastly, it provided a list of education gaps that JSOU can investigate to see if new courses can and should be developed to address future challenges.

The questionnaire was designed by JSOU vision team members. This vision team was organized to develop a long-range strategic plan for JSOU. The questionnaire targeted senior leaders within USSOCOM who are the same persons Kirkpatrick would designate as a viable target audience (the pinnacle of the supervisory chain; stakeholders who can make decisions) for Level 4, questioning when more direct measurable Level 4 indicators are not readily attainable. The intent of the survey was to attain a quick understanding of the participant's familiarity with JSOU and their thoughts on what education gaps presently exist. It was qualitative by design. Each participant was given space to name three gap areas for education that the respondent believed JSOU should focus. Follow-on questions were then asked regarding the focus areas the respondent listed as to the expertise level needed, the time that could be allocated to learn each area, the importance to the mission and the method of learning preferred. Additional space was allocated for participants to address current and future needs and provide general comments. The survey being qualitative in format necessitated that ample room was given for participants to write comments.

The questionnaire was distributed to 97 SOF senior leaders by email on November 5, 2018 and closed on November 19, 2018, see Appendix E. The email noted that the questionnaire was directed by the USSOCOM chief of staff to obtain stakeholder

input for JSOU's vision process and ensure the university is prepared to meet the current and future needs of the joint SOF community. The overall response rate was 18.5%. Respondents included nine senior enlisted, seven senior officers and three senior civilians or equivalents (see graphs below). Most were in command senior enlisted leader positions. Six were in staff roles, two were in command roles and two in "other," unspecified roles.

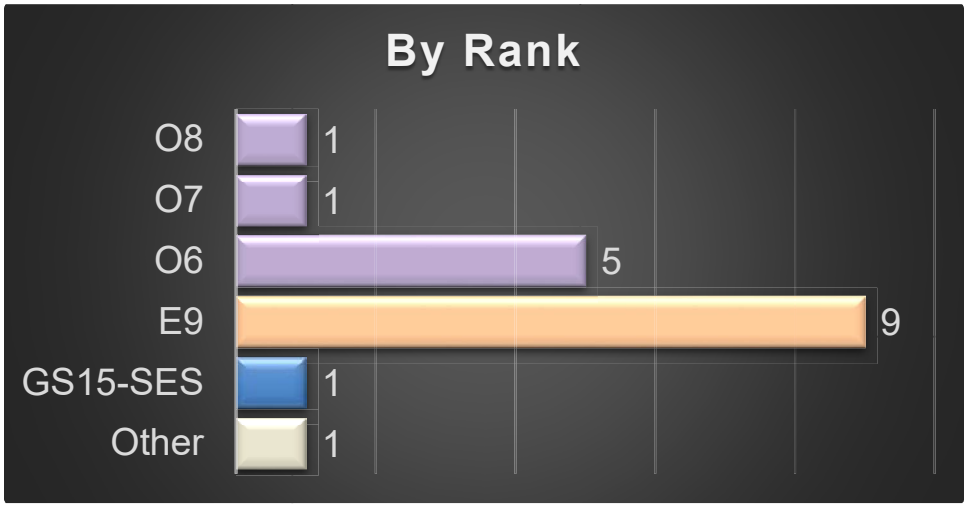


Figure 16. *Rank/Pay Grade of 2020 JSOU Strategic Vision Survey Respondents*

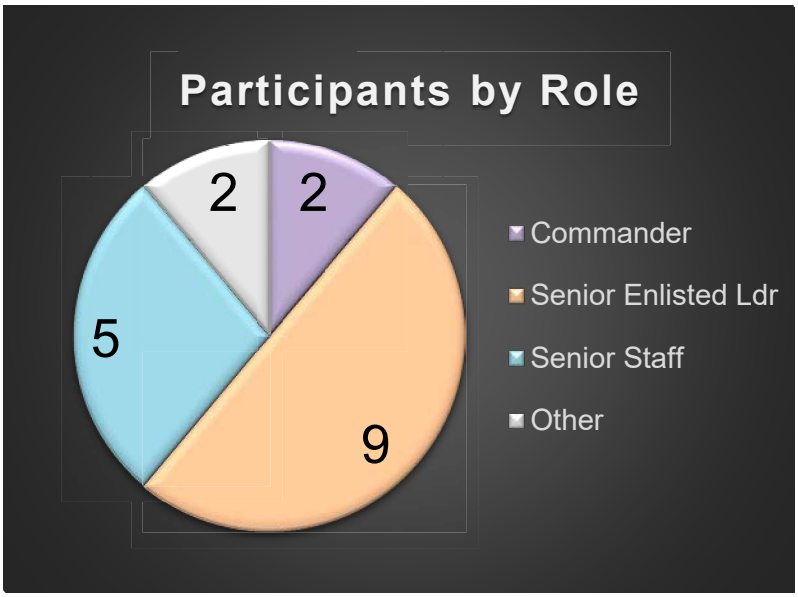
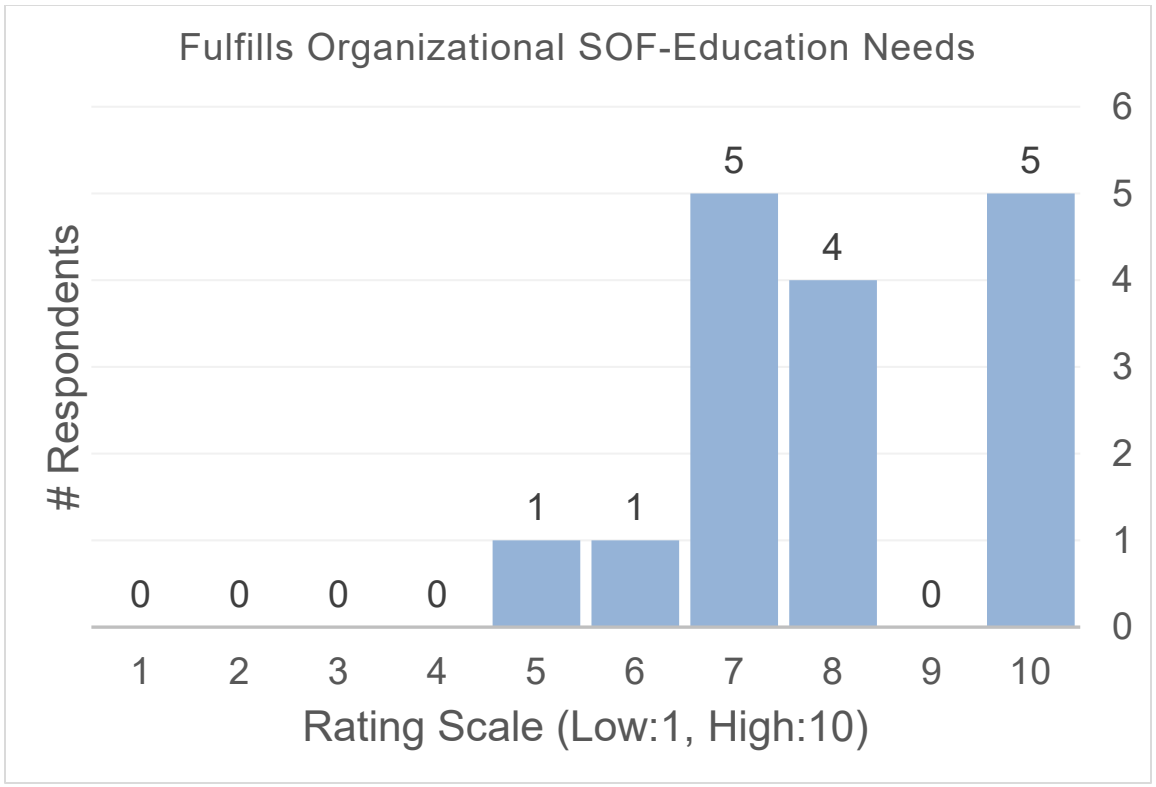


Figure 17. *Role of 2020 JSOU Strategic Vision Survey Respondents*

In reviewing the survey results, 16 out of 18 survey respondents felt that JSOU fulfilled their organizational SOF-education needs, scoring five or higher on a one to ten scale. A high majority, sixteen, felt familiar with JSOU and the education opportunities it offers.



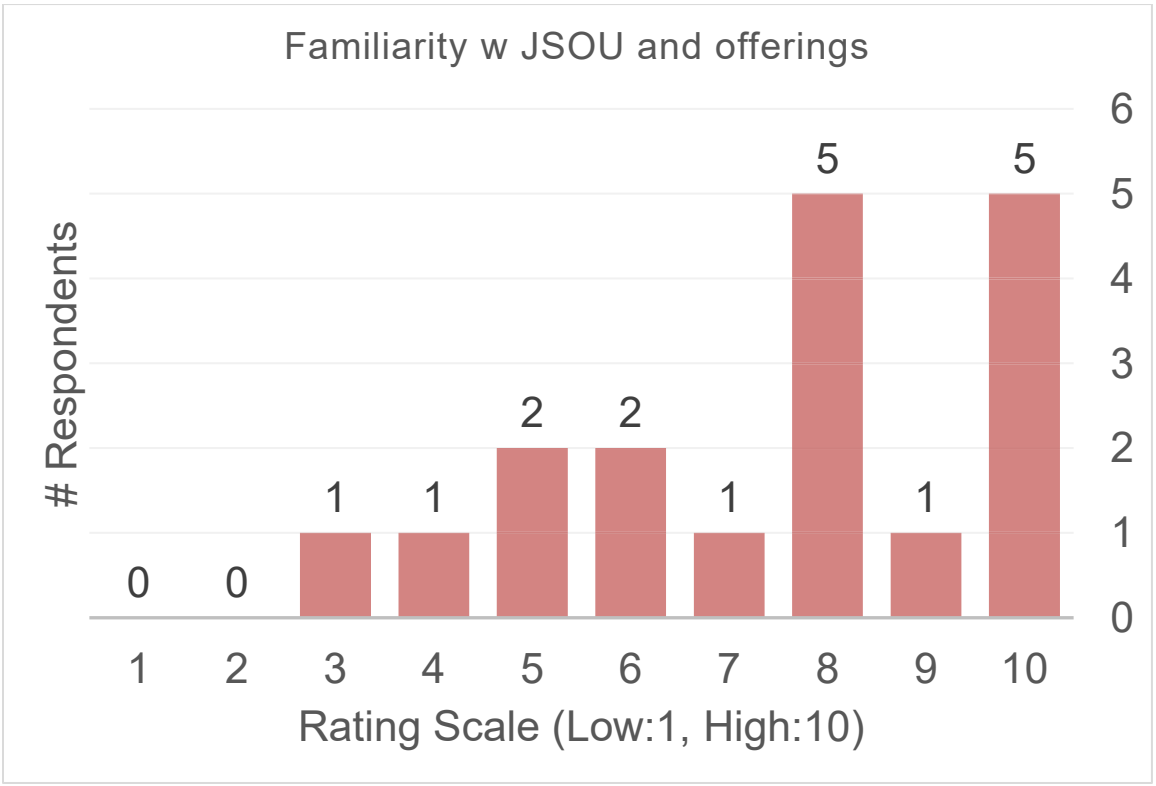


Figure 18. *JSOU 2020 Strategic Vision Survey Respondents Familiarity with JSOU*

An interesting note is that more respondents felt JSOU was fulfilling its organizational role than were familiar with JSOU's course offerings. Perhaps, even though a senior leader was unfamiliar with JSOU's offering, he or she had inferred from others that JSOU was meeting the needs of USSOCOM. With only 18 of 97 leaders responding to the survey, some may conclude that those who participated were those that were familiar to start, but with two respondents rating their familiarity with JSOU relatively low, that is most likely not the case. Others may assume lower participation indicates a portion not knowing or caring. There is no data, one way, or the other to support or refute these inferences. A more reasonable assumption is that those asked to complete the survey are in senior positions with limited time and had more pressing issues. With the multiple surveys DOD sends out every year to Service members on a wide range of issues survey response fatigue as noted by a DOD tiger team report in 2015 is also a probable explanation as to why only 19 persons responded (DOD, 2015c),

One of the questions asked in the questionnaire focused on the motivation for senior leaders to send persons to JSOU. The vision team's rationale was that just knowing "what" senior leaders want their troops to learn was not enough, the vision team believed it was just as important to understand "why" the senior leaders wanted their troops to learn the specific topic. Participants rank-ordered a set of 10 possible motivations. Each rank was given a weighted score, where the top choice equaled 10 points, and the bottom choice equaled one point. Some participants picked only a few motivations and left the remaining choices blank, resulting in no additional points. The 19 participants in the JSOU 2020 Strategic Vision Study were asked to rank the importance of why they would send one of their service-members to take a course at

JSOU from a list of possible responses. The responses were ranked by how many participants ranked that response higher than others. The ranking is shown on the following page, where the rank of 1 is the greatest and most important.

Table 10. *Senior Leader Motivation for Sending Students to JSOU*

Motivation	Raw	
Operational Knowledge	166	1
Professional Development	158	2
Organizational Development	106	3
Networking & Partner Building	105	4
Career Progression	79	5
Professional Military Education Credit	54	6
Other	46	7
Additional Skill Identifier	45	8
College Credits	43	9

The Value of JSOU

Participants were given the opportunity to clarify what they see as the overarching value of JSOU. Not every respondent wrote comments, but those that did (see below) were taken directly from the questionnaire in their entirety.

Table 11. *Value of JSOU*

Value of JSOU
Enlisted members who have attended one or more JSOU courses understand the enterprise that is SOF better than those who have not.
From my understanding and interaction with people, the JSOFSEA course and Summit courses are making a significant impact of attendees going into joint assignments.
In general, I have been somewhat disappointed with almost all of my military education opportunities. The great exception being Naval Post Graduate School. I have found that the service schools like Naval Ethics and Leadership School and, it pains me to say, even JSOU, tend to have some instructors who are not as talented as they should be.
JSOU courses are strongly encouraged across our SOF domain, but as the courses increase, we also need to keep an eye on the required Service courses and make sure we give the personnel time to complete everything required.
JSOU is bridging the gap of the Air Force and developing joint leaders. The AF typically does not expose its Airmen early enough; however, with these courses, that void is being filled.
Personnel comes back from JSOU with an increased understanding of SOF and leadership principles.

SOF SEA is valuable and respected by the SEA's that describe their experience.
The Enlisted Academy is phenomenal! We use it as part of our institutional requirements. However, they need to focus more on doctrine and the operational environment and less on college credits. For the rest of JSOU, The Pre-Command course is good, and a few other others but too many recycled briefs and facilitators and not enough emerging info and true subject matter experts.
Those individuals, as well as myself, who have had the opportunity to attend JSOU courses, return to the unit educate, informed, relative, and an invaluable asset to the formation. The education provided by the staff is "top-notch" and should serve as an example for service schools to emulate.
We use JSOU space but conduct our own training. I would like to see JSOU and J6 partner in developing the Future AI/ML Knowledge Worker regardless of their daytime job (e.g., cyber analyst, communications engineer). I would also like to see us, partner, to develop leap-ahead thought leaders in areas such as synthetic biology in military operations, multi-domain effects, gray zone situational awareness, and insider threat.

Those that chose to comment were laudatory of the JSOU-EA and positive regarding JSOU's role in providing an increased understanding of SOF to staff, junior NCOs or other groups. One noted that JSOU bridges the gaps in SOF specific education and fills a void not covered by a Service (or the Services), which is just as ADM Crowe, then Chairman Joint Chief of Staff (CJCS), stated USSOCOM needed to do in his speech at the activation ceremony of USSOCOM in 1987. Other comments included either a criticism or a compliment to specific instructor qualifications.

The JSOU vision team's questionnaire included other questions that focused on the future strategic vision and direction of JSOU. These questions, though very important, are beyond the scope of this case study, which is focused on JSOU's AY 2018 performance as viewed through the Kirkpatrick lens.

A total of five senior USSOCOM leaders in key staff positions at USSOCOM headquarters were interviewed in person by the vision team. The notes from the interviews show that all five interviews strayed off script very early on during the interview, not because the interviewer strayed but because the interviewee did. This is

understandable. The vision team was comprised of individuals lower in rank or paygrade than the person being interviewed. It could be inferred, knowing the customs and courtesies are so ingrained in DOD personnel, that the interviewers deferred to the senior ranking interviewee and allowed the interview to stray off-topic during the conversation if the interviewee chose to do so.

All five interviewees, in some form or another, stressed that JSOU's purpose was to fill in the educational gaps for USSOCOM. These "gaps" are areas of professional development unique to SOF that are not being provided by the traditional Service PME schools. The interviewees also stressed that JSOU was not and should not be a traditional PME-type school but rather an innovator, teaching SOF-unique course in multiple formats (DL, in-residence, etc.). All five interviewees saw value in JSOU and all were unanimous in insisting JSOU had not reached its full potential, although each interviewee had a different idea of what is JSOU's full potential. Some saw JSOU incorporating more tactical-level courses that would involve as much emphasis on training as it would education, such as joint special operations task force exercises and evaluations, while others envisioned JSOU taking on more of a think tank like role for USSOCOM.

In summary, the Level 4 data provided to the author are invaluable in ascertaining USSOCOM leadership's impression of JSOU and what it is or is not doing to support the SOF mission. The Level 4 data JSOU currently has available, though is sparse and focuses on the overall value of JSOU to the SOF enterprise, it is moot on identifying leadership's view of any specific course other than laudatory generalized comments regarding the courses offered by the JSOU-EA. Can this Level 4 data directly correlate to what is JSOU has in Level 1 and Level 3 data? The answer is no, but a qualitative

inference can be made that JSOU is providing a valuable service to USSOCOM. Feedback such as this must be continuously updated to ensure what is taught at JSOU is of a priority and relevancy that is in line with the needs of the SOF community.

Summary

JSOU's Level 1 AY 2018 data was voluminous and readily quantifiable. The Level 2 data needed to be extracted from JSOU's CRC minutes. The information, though, regarding assessments was not difficult to extract from the CRC minutes and thoroughly addressed the sufficiency of JSOU's ability to develop assessments that accurately assess whether students attained the knowledge that the course was designed to convey. The Level 3 data was far sparser, but this data, when reviewed with the Level 1 data, showed a slightly positive correlation between Level 1 survey results and Level 3 survey results. This, coupled with the qualitative comments reviewed by the author, gave the author a mixed-methods view of Level 3. Lastly, Level 4 data was almost entirely qualitative in nature. The Level 4 comments by respondents were invaluable since they were provided by senior decision-makers within the SOF enterprise, which are the ultimate recipients of JSOU's end product and its effects on the mission by way of their troops who attended JSOU. A mixed method of both qualitative and quantitative data is the end result when looking at JSOU's data for all of Kirkpatrick's four levels of measuring the effectiveness of JSOU in meeting the needs of USSOCOM. The next chapter will close out the discussion of this case study and make recommendations as to how JSOU can optimize Kirkpatrick's program to provide even more meaningful feedback to JSOU.

Chapter V

DISCUSSION AND RECOMMENDATIONS

Introduction

This case study seeks to contribute to the understanding of the application of the Kirkpatrick Model to the JSOU's educational programs. The study applied the Kirkpatrick Model to JSOU's educational programs by utilizing the 2018 JSOU course data. The main purpose was to apply the Kirkpatrick Model to JSOU through a mixed-method approach after a thorough review of available literature on the Kirkpatrick Model. The conclusions drawn from this study is discussed in this chapter.

Summary of the Study

This study examined the rationale for evaluating training and education programs, the four essential elements of the Kirkpatrick Model, the industry application of the Kirkpatrick Model, and compared and contrasted the Kirkpatrick Model with the other leading evaluation program, the ROI Model. This study explained how and why most institutions fail to implement all levels of the Kirkpatrick Model. Also, the study critically examined if partially implementing the Kirkpatrick Model would satisfy the needs of an institution's leadership to make training and education investment decisions.

In AY 2018, JSOU followed the Kirkpatrick Model of evaluation of training. This model includes four levels. These areas include measuring changes in the following order: Level 1, student reaction, which measures how those students receiving the training or education reacted to the course. In many ways, it is comparable to a customer

satisfaction survey immediately after purchasing a product. The second level is Level 2, measuring learning. Did learning occur? This level is quite often measured by requiring the students to present a case study, take a test or in some way demonstrate that they learned what the instructor intended for them to learn. Next, Level 3 of Kirkpatrick's four levels is behavior. Did the student's behavior, as it relates to what she or he learned in the course, change after attending the training session? Another way of asking the question would be, "Is the student applying on the job what he or she learned in the course?" JSOU conducted its Level 3 surveys anywhere from three to nine months after the student returned to their job. The last and most difficult level of evaluating the effectiveness of training, according to Kirkpatrick, is results. This is where organizations are looking for evidence that the training provided is resulting in the intended impact, thus answering the question of whether investing in the training is worth expending organizational resources. Sometimes, though, depending on the type of training received, it may be very difficult for a company to assess the Level 4 results accurately and decisively. Some training programs have long-term goals in mind, such as diversity in the workforce or conflict resolution. These types of programs with soft skills will instead rely on indicators from the evaluations of the other three levels of evaluation to build a case for the results-oriented leadership (Kirkpatrick & Kirkpatrick, 2016). The argument that all four levels are vital to evaluating the success of a training or education program is very compelling. The four levels cover almost every facet imaginable of measuring the outcomes from said training or education program.

Problem Overview and Purpose of the Study

The focus of this study is JSOU, which is a system within the greater system of training and education entities of the DOD. This system requires timely feedback from the end-user to maintain relevancy and currency. JSOU's mission is "to prepare special operations forces (SOF) to shape the future strategic environment by providing specialized JPME, developing SOF-specific undergraduate and postgraduate-level equivalent curriculum, and by fostering special operations research, analysis, and outreach in support of the United States Special Operations Command (USSOCOM) objectives." (JSOU, 2017a, p. 1) The purpose of this study is to determine, via one of the most widely-accepted training and evaluation models in use by industry and government today (Kirkpatrick, 2018), whether JSOU is meeting its mission of preparing SOF to achieve USSOCOM objectives.

Research Questions

The research questions for this case study are as follows:

Research Question 1: To what extent is there a correlation between the Level 1 reaction survey results and the Level 3 behavior survey results?

Research Question 2: By applying all four levels of the Kirkpatrick Model utilizing a mixed-methods approach, how does the evidence show that JSOU is meeting the needs of USSOCOM as envisioned by USSOCOM leadership?

Methodology

The methodology for this study followed a mixed-methods approach that applied to JSOU's AY 2018 collected data on the university's performance to its corresponding to one of the four levels of the Kirkpatrick Model. A summary of each level's

methodology and results is addressed in the following paragraphs.

Level 1

The data used to compile JSOU's annual Factbook was used for the Level 1 analysis. All JSOU courses use the same Kirkpatrick Level 1 end-of-course survey for students to rate their satisfaction with the course (Appendix B). The Kirkpatrick-specific portion of the survey asks the student four different questions regarding their satisfaction with the course. The survey uses a Likert scale-type rating of one to five, with five being the highest level of satisfaction, for the questions.

The scores for the questions are compiled into an average (mean) and that is the overall score for that specific iteration of the course. The data were reviewed for any possible information that addresses Kirkpatrick's Level 1 criteria. Questions three, four, five and six of the reaction surveys were specific Kirkpatrick "type" Level 1 questions, and these questions were isolated and their mean average compared to the overall survey score to ascertain if there was any discernible difference. After removing questions one and two from the JSOU survey, the mean average of JSOU's Level 1 surveys were compared via a scatter plot diagram to the mean average of JSOU's AY 2018 level 3 surveys scale to determine if there is any correlation. JSOU's Level 3 surveys used the same one to five Likert scale. Only course iterations that JSOU had both Level 1 and three data were analyzed for this portion of the study.

The Level 1 data showed that JSOU courses are well received by the students with an overall high satisfaction rate of 4.7 on a 5.0 scale (JSOU, 2018, p. 27). The null hypothesis for the correlation between the level 1 survey question and the level 3 survey question (below) was disproven.

Null Hypothesis: There is no correlation between the level 1 question regarding usefulness of the course taken to the student's job and the Level 3 survey question pertaining to the student's assessment of the course as being useful to his or her job three to six months after having returned to his or her job.

Both the Pearson *r* and a scatter plot diagram were run off the mean averages of the Level 1 and Level 3 survey questions. The results are as follows:

The Pearson *r* for this correlation was (.3086), which is a positive correlation yet actually slightly less than the correlation test run, where the average of all of Level 1 questions three through six were compared to Level 3's overall average (.4105) Pearson *r*. The reason for the drop in correlation when comparing only questions four from both surveys is because two courses (Countering Weapons of Mass Destruction Foundations Course and Counter-Proliferation Opportunity Design Course) had nearly a full point drop in their Level 3 satisfaction response to question four regarding usefulness on the job. This drop may point to a target audience problem regarding who is actually attending the course and whether the graduates were in jobs that gave the graduate the opportunity to apply what he or she learned. Another possibility in the drop is issues with the instructor or potentially a course topic issue, to name a few. This is something that would require further analysis and is an example of how utilizing the Kirkpatrick Model can provide useful feedback that helps an organization evaluate the effectiveness of their program.

The scatter plot diagrams (Figure 11) corroborated the findings of the Pearson *r* equation that there is a slight correlation between JSOU's Level 1 and Level 3 surveys.

Level 2

In AY 2018, all JSOU courses excluding pilot courses (courses in development)

were required to undergo an annual curriculum review by a board composed of JSOU leadership. JSOU has an extensive curriculum review process that includes ensuring students are assessed at the appropriate level for the subject matter being taught. The committee ensures that not only are students being assessed but that the assessments accurately evaluate the desired learning outcomes of the course. Level 2 analysis was conducted via a qualitative review of JSOU's CRC meeting minutes for committee comments pertaining to the course assessment plan that each instructor of record is required to submit and any subsequent discussion that took place during the CRC meeting regarding course assessment for the courses under review for AY 2018. The author looked for any notable concerns or discussion by committee members relating to the course's design and its ability to meet the curriculum design team's stated course objectives.

The Level 2 qualitative review showed that JSOU's courses, overall, are assessing students on the desired learning outcomes and at the appropriate level. Courses that had assessment issues identified via the CRC process were directed to take corrective action. Courses with major deficiencies were subsequently reviewed a second time via supplementary review by the committee after corrections were made. Courses with minor deficiencies were only reviewed a second time by the director of curriculum. In total, 22 courses, to include three conditionally approved, were found to have some sort of assessment issue that was of concern to the committee (Table 6). These courses were subsequently all given a satisfactory rating by the committee. In summary, a rigorous CRC process ensures students are being assessed on the desired learning outcomes.

Level 3

JSOU's Institutional Effectiveness Office created a survey that is sent to recent graduates of select JSOU courses (Table 9). This survey homed in on whether the student had adjusted their behavior in the workplace to incorporate what he or she learned at JSOU. This survey was reviewed by the Kirkpatrick Institute for suitability to be used as a Level 3 survey in accordance with the Kirkpatrick Model (Edwards, 2018). The statements in the survey are rated on a Likert scale of one to five, with five being the most satisfied. In addition, there is an area for the respondents to write any comments they want to leave regarding their learning experience at JSOU, specifically any suggestions as to how the course may be improved and comments as to the relevancy of the course the respondent took as it relates to their job.

The student ratings of the following statements in this survey that specifically pertain to Kirkpatrick's Level 3 evaluation are as follows:

- Opportunity to apply what you learned.
- Confidence applying what you learned.
- Commitment to applying what you have learned.
- Desire to continue learning in this subject area.
- Importance of course content.

The following statements were rated with a Likert scale of one to five, also with five now being strongly agreeing and one strongly disagreeing.

- The course increased your knowledge of the subject matter.
- The course has improved your ability to meet future challenges.
- The course prepared you to interact more effectively with other

organizations/agencies.

- The educational experience has been useful to you in your job.
- The organizational investment to send you to this course was worthwhile.
- You were satisfied with the course.
- You would recommend the course to others.

All the Level 3 surveys were reviewed via a word cloud looking for recurring qualitative statements in the comments section of the survey as well as reviewed quantitatively looking for an overall average mean of how JSOU students rate the courses they have taken in relation to Kirkpatrick's Level 3 evaluation of changes in workplace behavior. Additionally, question four regarding usefulness in the workplace was compared to the Level 1 question number four that asks the respondent to rate the extent to which the student expects the course he or she completed to be useful in his or her job.

The quantitative aspect of Level 3 was answered earlier in this chapter during the Level 1 correlation discussion except for the overall mean score that students gave for their view of the usefulness of the course in their job. This mean score was 4.42 (Chapter 4), which shows that students do view the course he or she took as having been useful in their job.

Qualitatively Level 3's a word tag cloud review (Figure 15) showed that the prominent words were positive words such as great, recommend, useful, best, beneficial, understanding, etc. This is in line with the author's reading of the comments. The majority of the comments from the Level 3 respondents were laudatory in their description of the courses the students took at JSOU. The author noted that respondents who took the chaplains course were extremely effusive in their praise of the course they

had taken. There were some recommendations on possible ways to make a specific course even better, but not a single respondent stated the course he or she had taken was not worth attending. The usage of the word cloud was a useful tool in discerning generalized trends in the comments provided by respondents.

Level 4

Level 4 was based on analysis of senior leader interviews and questionnaires (figures 16-17 and tables 10 & 11) that JSOU has collected at the beginning of AY19 while working on a revised JSOU strategic plan. These interviews and questionnaires were backward-looking in the sense of asking the respondent questions regarding JSOU's past performance and what, if any, recommendations the respondent had for JSOU's future. Since the interviews and questionnaires were sent within the first few months of AY19, it was inferred that the responses were generally a reflection of the respondent's views of JSOU's AY 2018 and before performance. These interviews and questionnaires were specifically created to assess SOF senior leadership's perception of JSOU and its service to the SOF enterprise. Questions in the interview were the following.

- In your own words, what is the purpose of JSOU?
- What is JSOU not doing that it should be?
- Do you have any recommendations as we consider the future of JSOU?
- What is JSOU doing right?
- What needs improvement?
- What gaps do you see in SOF education?
- What is the motivation of sending personnel to JSOU for education?

The notes from these interviews were reviewed for any information that might

indicate SOF leadership's level of satisfaction with the education JSOU is providing the SOF community.

In addition to the one-on-one interviews, JSOU developed a questionnaire (Appendix E) that was sent to senior SOF leaders that were not interviewed in person. This questionnaire looked at not only senior leaders' current satisfaction with the education JSOU provides but also asked how JSOU could improve its educational offerings such as adding new courses, changing the delivery method of courses, shortening or lengthening the course, etc. The questionnaire was distributed by email at the request of the USSOCOM chief of staff to obtain stakeholder input to inform JSOU as to whether JSOU was prepared to meet the current and future needs of the SOF community.

Questions in the survey that pertain to Kirkpatrick Level 4 evaluation focused on the SOF leadership's familiarity with JSOU, its role in educating the SOF enterprise, the value of JSOU to SOF, areas of military concern that JSOU should educate the SOF community on and lastly any comments.

These Level 4 surveys and interviews were not specifically focused on any one course like the Levels 1 through 3 evaluations. They provide important feedback to JSOU as to whether the institution is meeting senior leadership's expectations. These interviews and questionnaires were reviewed through the analytical lens of a qualitative review since the number of survey and interview respondents are low in number. These Level 4 questionnaires and interviews are critical to JSOU because of the target audience. The individuals questioned by reason of their influential positions within USSOCOM collectively hold the fate of JSOU in their hands. The Level 4 data JSOU has is not as

hard-hitting and specific; rather, the data is more opinion-focused, but as stated earlier, the opinions are those of key leadership that controls the fate of JSOU.

The Level 4 data provided to the author was invaluable in ascertaining USSOCOM leadership's impression of JSOU and what it is or is not doing to support the SOF mission. Overall, senior leadership had a positive view of JSOU and was supportive of the organization. There was a total of five senior-level interviews and nineteen senior-level survey responses. The surveys and interviews focused on the overall value of JSOU to the SOF enterprise. The data was moot on identifying leadership's view of any specific course other than laudatory generalized comments regarding the courses offered by the JSOU-EA.

Can Level 4 data directly correlate to what JSOU has in Level 1 and Level 3 data? The answer is no, but a qualitative inference can be made by looking at JSOU's Level 1 through 3 data in the aggregate along with the Level 4 data that JSOU is providing a valuable service to USSOCOM.

Research question two of the case study is, "by applying all four levels of the Kirkpatrick Model utilizing a mixed-methods approach, does the evidence show that JSOU is meeting the needs of USSOCOM as envisioned by USSOCOM leadership?" This question can be answered with an emphatic, yes. The evidence is both direct and indirect in nature with the data from Levels 1 through 3 drilling down to specific courses, both quantitatively and qualitatively. The Level 4 data is strictly an overall impression of JSOU by SOF leadership, but it is critical because of the positions the individuals surveyed hold. Much like a prosecutor will argue a case in court with both direct and indirect evidence as to the guilt of the defendant, one can make the argument from the

data presented in this case study that JSOU is meeting the needs of USSOCOM.

This case study gave the author an overall impression of JSOU's performance. The luxury of specific course data from Levels 1 through 3 allows JSOU to not only identify courses that are not meeting standards and take corrective action, but it can also be reviewed in the aggregate giving the author a picture of overall JSOU performance. Since many of the senior leaders themselves have not actually attended JSOU courses, it can be inferred that senior leadership's positive impression of JSOU at Kirkpatrick's fourth level of evaluation is driven by the feedback senior leaders have received from their personnel who have attended JSOU. This inference could be verified in further study with follow-up surveys and interviews to determine the basis for senior leaders' impressions of JSOU.

Findings Related to Literature

There were several findings related to the subject literature. The first of these was the author's question of a correlation between Kirkpatrick's Level 1 and Level 3 data. This case study confirmed the earlier 1999 Air Force Research Laboratory Study that concluded via a meta-analysis study that a modest correlation existed.

Another finding was that JSOU's difficulty in obtaining sufficient Level 3 and 4 data reinforces the 2002 American Society for Training and Development's study that showed in their 2002 State-of-the-Industry Report that 78% of the benchmarking organizations surveyed reported using at least Level 1 reaction measures to measure effectiveness of their training and education program. Additionally, 32% of the organizations surveyed utilized both Levels 1 and 2, 9% use Levels 1 through 3 and only 7% incorporated all four levels when evaluating their programs for learning. In

summary, 78% did some sort of evaluation, with the majority of that being Level 1 reaction and Level 2 assessment data collection. This left 22% that did no evaluation of any type at the end of the course. The reasons given as to why more did not pursue all of Kirkpatrick's four levels of data could be summed up as resource constraints, time constraints and the overall cost involved with obtaining additional data (Association for Talent Development (ATD) staff, 2009).

Lastly, a study conducted in 2014 at King Saud University on research methodology workshops for healthcare professionals found that all of Kirkpatrick's four levels were extremely useful in evaluating the effectiveness of the workshops themselves. The King Saud study, along with this study, is one of the few studies that took a holistic approach to the Kirkpatrick Model to ascertain the value to the organization of the training and education provided. JSOU's use of Kirkpatrick is not unlike the King Saud Study. The researchers in the King Saud study found that the information gleaned from evaluating all four levels using both quantitative and qualitative methods provides valuable data that can be utilized to not only more effectively meet their organizational goals but justify their utility to their stakeholders (Abdulghani, et al., 2014).

Conclusions

Evaluating the effectiveness of an organization's training and education program is a relatively complex process. The implications of not properly ascertaining the effectiveness of training and education programs can have dire consequences on an organization such as JSOU. From a JSOU-centric view, if JSOU is unable to prove its worth, then other DOD educational bodies could be tasked with educating the SOF enterprise. If another DOD school has effectively proven its value to DOD, that

organization might be given not only JSOU's mission as an additional task but also the resources originally allocated to JSOU. From an overall DOD perspective, faulty training and education can cost the nation not only time and resources expended but potentially lives and even national security itself. The stakes for JSOU could not be higher.

The research has demonstrated that the Kirkpatrick Model is the government standard by which public administrators are encouraged to determine the effectiveness of their training and education programs. The GAO statement in a 2017 report to Congressional committees that "lack of evaluations may be the greatest barrier to their informing managers and policymakers and constitutes a lost opportunity to improve the efficiency and effectiveness of limited government resources" (GAO, 2019). This GAO emphasis on program evaluation is reinforced by what the Air Force stated in a 1992 report, addressing program evaluations related to training and education programs, that "program evaluation should be viewed as an iterative process that begins before the program is implemented and continues to provide formative support throughout the life of the program. Evaluators have realized that the inherent multiplicity of programs requires different evaluation activities to be employed based on the program's stage of development and on the needs and expectations of the program decision-makers" (Mattoon, 1992, p. 26). This emphasis by GAO and the Air Force is reason enough for a public administrator of an open and adaptive system such as JSOU to take heed of the need for actionable feedback as to the effectiveness of JSOU in meeting the educational needs of the SOF enterprise.

Recommendations

JSOU's use of the Kirkpatrick Model is marginally effective in demonstrating its

worth to SOF senior leadership as well as providing JSOU leaders with the required feedback to continue to evolve to the needs of its customers. More, though, should and could be done in order to meet the GAO desire to provide decision-makers with the information needed to improve the efficiency and effectiveness of JSOU. JSOU's Level 1 data is voluminous and sufficient for what is expected from a Level 1 perspective. Level 2 could be improved by making it a policy of inviting SOF stakeholders to meet with the CRC to discuss the assessments' practicality to real-world applications and have these SMEs give their views as to the currency of the course material being used. With JSOU itself identifying 36% of its courses as having some sort of assessment issue, further training is required of the faculty as to how to properly assess students. Training should focus on encouraging instructors to develop assessments that include both formative (during learning) and summative (after learning) assessments. Checks for learning need to be done throughout the class not just at the end. Level 2 is critical to the SOF enterprise because erroneous assumptions about Level 3 changes in behavior can be made by assuming learning took place when it may not have occurred. JSOU should not only invite SME's to their CRCs but have SMEs participate in the review of assessments. For example the Association for Talent Development recommends when developing assessments to have SMEs participate so that the assessment is designed for the desired results in the work place. Select three to five SMEs who are experts in the competencies being assessed and have them independently review the assessment to ensure the desired learning objectives are actually being assessed. After the SMEs independently review they then could gather to debrief their results and through collaboration with an assessment specialist develop a comprehensive assessment that actually measures desired

learning objectives. (Association for Talent Development, 2009)

A 9% return rate on JSOU's Level 3 surveys is far from ideal and is ammunition for naysayers with a thirst for a more quantitative look at JSOU's performance. Level 3 data must be improved by attempting to gather more information in ways other than traditional surveys. Phillips recommends interviews of graduates both structured and unstructured with the structured portion ensuring desired questions were asked but also leaving time for unstructured questions where a skilled interviewer can probe for additional information that may have not been originally considered. Focus groups with graduates could also be done and are much like interviews. These can yield in depth feedback. Phillips contends though that focus group information needs to be combined with data from surveys, questionnaires etc. to be truly effective. (Phillips & Phillips, 2017, p. 133) Direct observation by JSOU personnel of recent graduates in training exercises or real-world deployments is also another tool JSOU could employ. The observations need to be systematic and well developed to ensure what is actually being measured. To be truly effective, the observations need to be virtually invisible or routine lest a Hawthorne Effect may occur where those being observed alter their performance because of the observation. Also, JSOU could create an alumni discussion page where graduates would be encouraged to submit their stories as to how a JSOU course improved or did not improve their effectiveness on the job.

With respect to Level 4, JSOU could do many of the same things mentioned in recommendations for Level 3 but with the focus on the supervisors of graduates. JSOU should also include sensing sessions with SOF senior leadership, where the JSOU leadership tries to personally meet with SOF senior leaders at their various locales to get

their impression of what JSOU is doing right and wrong. These meetings should not be haphazard and should be driven by a defined series of questions focused on JSOU's effectiveness, along with ample time for free and open discussion. After action reports of those meetings should be written and kept for future reference. Understanding the tyranny of distance and the resources involved, the goal should be for JSOU leadership to meet with each SOF Service component commander and every TSOC commander on a biennial basis.

JSOU's low survey response rate for both Levels 3 and 4 are of concern. JSOU should consider not only alternative ways to collect Level 3 and 4 data such as focus groups, observation etc. as already mentioned but also should not give up the pursuit of survey responses. JSOU could try posting survey opportunities in multiple social media channels such as their Face Book page and website. The more venues a potential survey respondent is given the opportunity to give their opinion the better.

Relevant Level 3 data in sufficient quantities would allow JSOU to do a better analysis of whether the target audiences they have designed for their courses is actually on target or not. Level 3 data of usage on the job when compared to Level 1 data of the students' own rating of whether they expect to use the knowledge gained from the course on the job will allow JSOU to ascertain if what is being taught is actually making it into the workplace and if not then the question is if JSOU is reaching the right audience? The anonymity of the survey respondent though will be problematic in identifying who in the audience should or shouldn't have been in the class. The question is whether the target audience the course was intended for actually attends after the course is built. It is possible vacancies are filled with students not considered the target audience. Is there an

evaluation of demographics currently? Yes, every iteration conducted has a final Course Report for record that includes the demographics of those attended. Could that be based on Level 1 and 3 data? Data comes directly from JSOU's student registration system for 100% of those completed. Level 1 and Level 3 are anonymous surveys and therefore not a recheck on demographics. Due to ranks, services, time in service and other demographic factors, it would be too easy to determine the student that submitted the survey if demographics were included (i.e., the lone Army Sergeant). JSOU keeps them separate to allow honest feedback. The only way to insure the integrity of the surveys and validity of the target audience is to require the instructors to adhere to admitting only those students that are in the target audience as defined during the course creation. Understanding the needs (and stated requirements) for the target audience enables the correct creation of the curriculum. The question is whether the target audience the course was intended for comes after it is built.

JSOU should not attempt to achieve the unachievable, though, where unequivocal evidence is found that proves the value of JSOU in every course it teaches. Expending the resources involved in gathering additional data make no sense for JSOU to determine if some of its lower-level introductory courses are having the desired impact beyond a Level 1 and 2 analysis. Inferences can and should be made from the Level 1 and 2 data. Acquisition of Level 3 and 4 data should be targeted to those courses that have the greatest impact and relevancy to the SOF enterprise. Courses could be prioritized for collection and analysis of Level 3 and 4 data based on resource expenditure involved in creating the course , e.g., manpower, travel, information technology support, etc. along with those courses identified as mission essential to SOF. Deciding which courses to

pursue Level 3 and 4 data must be done by JSOU leadership only after a thorough analysis of the criticality of the course to SOF and resources required to teach the course. When considering resources, do not forget to include the man-hours expended by the student in taking the course. These are man-hours that could have been used elsewhere by the SOF enterprise to do other work. If and when after conducting Level 3 and 4 evaluations of a course that is both resource intensive and potentially suspect as to the value the course provides the SOF enterprise than perhaps JSOU could conduct a Phillips type ROI aka Level 5 study where the value of the course is put into monetary figures and compared to the expenditure of resources needed to execute the course. For Level 5 to be of any value monetization of the value gained from the course will have to be defined. For example the average time saved in performing a task can be converted to man hours saved which can then be converted to an hourly rate dollar figure. For JSOU to be truly successful at levels 3, 4 and potentially 5, JSOU needs to ensure they have a repeatable and standardized way of accounting for the resources expended in creating and executing courses. Lastly, the Level 4 sensing sessions of SOF senior leadership will only provide JSOU with a macro-level sense as to the effectiveness of JSOU; for JSOU to truly embrace Kirkpatrick the recommendations the author has suggested here need to be implemented.

Final Remarks

For now, until someone builds a better mousetrap, as discussed in the Literature Review, the Kirkpatrick Model and the ROI Model are the standard for evaluating the effectiveness of training and education programs in both government and industry. Further study as to the effectiveness of the Kirkpatrick Model in regard to JSOU is only

warranted should JSOU implement some of the recommendations made in this research study. Further study could include a revised statistical analysis of JSOU Level 3 data should JSOU ever collect Level 3 data in a larger, more significant statistical quantity. This data could then be compared again to JSOU's Level 1 data and the correlation discovered in this study subsequently reinforced or disproven. A more in-depth review of Level 4 data is also warranted when JSOU is able to attain not only senior leadership's overall impression of JSOU but the graduates' supervisors' impressions of the specific course their subordinate took at JSOU. This data was not available for this study. JSOU must be prepared to prove its value to stay relevant in an era of ever-changing threats. More importantly, JSOU owes it to every Soldier, Sailor, Airman and Marine, along with their civilian agency partners, to provide them with the SOF requisite knowledge needed to prevail in whatever national security challenges they face.

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APPENDIX A:

JSOU's ACCET Certificate of Accreditation

Accrediting Council for Continuing Education & Training

Certificate of Accreditation

Be it known that

Joint Special Operations University
Tampa, Florida

has been duly examined and found to be in compliance with the standards for accreditation of the Accrediting Council for Continuing Education & Training and accepts the responsibility to maintain a high level of quality and integrity during the term of this grant of accreditation.

In witness whereof, we the undersigned, by order of the Commission, affix our signatures.

December 15, 2019
Date of Expiration

Chair

Executive Director

APPENDIX B:

IRB Exemption Letter

Institutional Review Board (IRB)
For the Protection of Human Research Participants

PROTOCOL EXEMPTION REPORT

Protocol Number: 03938-2019 **Responsible Researcher:** Mr. Shannon Meade

Supervising Faculty: Dr. Robert Yehl

Project Title: *A Case Study of the Application of Kirkpatrick's Evaluation of Training Model to the Joint Special Operations University.*

INSTITUTIONAL REVIEW BOARD DETERMINATION:

This research protocol is **Exempt** from Institutional Review Board (IRB) oversight under Exemption **Category 4**. Your research study may begin immediately. If the nature of the research project changes such that exemption criteria may no longer apply, please consult with the IRB Administrator (irb@valdosta.edu) before continuing your research.

ADDITIONALCOMMENTS:

- *Upon completion of this research study all data (data list, email correspondence, etc.) must be securely maintained (locked file cabinet, password protected computer, etc.) and accessible only by the researcher for a minimum of 3 years.*

☒ ***If this box is checked, please submit any documents you revise to the IRB Administrator at irb@valdosta.edu to ensure an updated record of your exemption.***

Elizabeth Ann Olphie *10.16.2019*
Elizabeth Ann Olphie, IRB Administrator

Thank you for submitting an IRB application.
Please direct questions to irb@valdosta.edu or 229-253-2947.

Revised: 06.02.16

APPENDIX C:

JSOU Level 1 End-of-course Survey

JSOU Course Critique Form

Course: Date(s):

Course Director:

Overall Lesson Critique

Consider the overall course and indicate the level (with a ☑) to which you agree with each statement below.

	Strongly Agree	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The course was well organized.	☐	☐	☐	☐	☐
The objectives of the course were successfully achieved.	☐	☐	☐	☐	☐
The content of the course was what I expected or better.	☐	☐	☐	☐	☐
The information provided in the course will be useful to me in my job.	☐	☐	☐	☐	☐
I would recommend this course to others.	☐	☐	☐	☐	☐

Comments (Optional)

Student feedback is used by JSOU Faculty to improve courses and determine relevance of course content to both individuals and organizations. Please provide your comments in the appropriate box below.

Content and Materials

Quality of Instruction

Classroom Environment

Recommendations or Comments

Please return this form to your instructor upon completion of the course. Thank you.

JSOU L1 Form B (AY15 v1, 1OCT14)

APPENDIX D:

JSOU's Level 3 Survey

In the past year, you attended a course provided by the Joint Special Operations University. In an effort to improve this course, please take a few minutes to answer the following questions. Results will be used to determine the relevance of course content to both individuals and organizations. This information will be used for statistical analysis only. No attempt will be made to identify participants. Thank you.

Please select the course you attended and wish to evaluate.

- ❍ (Student selects from drop down of all courses)

The course was conducted:

- ❍ At MacDill AFB
- ❍ Off-site (location other than at MacDill AFB)

How often do you apply what you learned from this course to your job?

- ❍ Always
- ❍ Often
- ❍ Seldom
- ❍ Never

(If Seldom or Never) What has kept you from successfully applying your learning?

- ❑ Too busy
- ❑ Lack of management support
- ❑ Other higher priorities
- ❑ Tried skills/techniques and didn't work
- ❑ Other (Please specify) _____

Please identify your *current* levels to each:

	Very High	High	Somewhat	Low	Very Low
Opportunity to apply what you learned	❍	❍	❍	❍	❍
Confidence applying what you learned	❍	❍	❍	❍	❍
Commitment to apply what you learned	❍	❍	❍	❍	❍
Desire to continue learning in this subject	❍	❍	❍	❍	❍
Importance of course content	❍	❍	❍	❍	❍

Overall Value of the Course

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The course increased your knowledge of the subject matter.	❍	❍	❍	❍	❍
The course has improved your ability to meet future challenges.	❍	❍	❍	❍	❍
The course prepared you to interact more effectively with other organizations/agencies.	❍	❍	❍	❍	❍
This educational experience has been useful to you in your job.	❍	❍	❍	❍	❍
The organizational investment to send you to this course was worthwhile.	❍	❍	❍	❍	❍
You were satisfied with the course.	❍	❍	❍	❍	❍
You would recommend the course to others.	❍	❍	❍	❍	❍

Why did you choose to take this course? (select all that apply)

- ❑ Personal Growth
- ❑ Career Development
- ❑ Required
- ❑ Acquire New Skills/Knowledge
- ❑ Continuing Education
- ❑ Other (please specify) _____

How long ago did you complete the course?

- ❍ Less than 6 months ago
- ❍ Between 6 and 9 months ago
- ❍ Between 9 and 12 months ago
- ❍ Over a year ago

(Optional) Please use the space below if you wish to share any examples or insights pertaining to the course's usefulness, relevance, or importance.

(Optional) Please feel free to offer any comments about your educational experience or suggestions for course improvement below.

_____

APPENDIX E:

SOF Senior Leader Education Questionnaire

SOF Senior Leader Education Questionnaire

The Chief of Staff, USSOCOM, has directed a team to assess and update the vision of the Joint Special Operations University (JSOU). This unclassified questionnaire is intended for SOF senior leaders and senior staff to provide stakeholder input to help ensure JSOU is best prepared to meet the current and future needs of the SOF community. The summary results of this questionnaire will be available FEB 2019. Thank you in advance for your time and input.

Rank. Rank or Grade (or equivalent):

❍ GS15-SES (or equivalent, civilian), ❍ E8, ❍ E9, ❍ O5, ❍ O6, ❍ O7
❍ O8, ❍ O9, ❍ O10, ❍ Other

Role. Current Role:

❍ Commander, ❍ Senior Enlisted Leader, ❍ Senior Staff, ❍ Other

JSOU Attendance. How many JSOU Courses have you attended?

❍ 0, ❍ 1, ❍ 2, ❍ 3, ❍ 4, ❍ 5 or more

Familiarity. Please select the level to which you agree with each statement.
Select from 1 (Strongly Disagree) to 10 (Strongly Agree)

- *I am familiar with JSOU and what it offers.*
- *JSOU is used to fulfill our organization's SOF-specific education needs.*

Value. Use the space below if you wish to share any observed impacts or results from personnel attending JSOU courses.

Focus Areas. If there are gaps in SOF education, please list the top areas to address in order. These can be specific topics or general areas of concern. Questions that follow will refer to these three areas.

Focus Area #1: _____

Focus Area #2: _____

Focus Area #3: _____

Focus Allocations. For the top three gaps, you identified, please indicate the EXPERTISE level, IMPORTANCE, preferred METHOD of instruction, and MAX TIME you would allocate to your personnel to attend an applicable course.

Expertise Level Desired

	Beginner	Intermediate	Advanced
Your Focus Area 1 (as written)	❍	❍	❍
Your Focus Area 2 (as written)	❍	❍	❍
Your Focus Area 3 (as written)	❍	❍	❍

Importance

	Career Enhancing	Mission Essential	Mission Critical
Your Focus Area 1 (as written)	❍	❍	❍
Your Focus Area 2 (as written)	❍	❍	❍
Your Focus Area 3 (as written)	❍	❍	❍

Method of Instruction

	Distance Learning	Resident (w/ other students)	Mobile Education Tm (your location & students)
Your Focus Area 1 (as written)	❍	❍	❍
Your Focus Area 2 (as written)	❍	❍	❍
Your Focus Area 3 (as written)	❍	❍	❍

Max Time to Participate

	Distance Learning	Classroom (1-2 days)	Classroom 1 wk.	Classroom 2-3 wks.	Month+
Your Focus Area 1 (as written)	❍	❍	❍	❍	❍
Your Focus Area 2 (as written)	❍	❍	❍	❍	❍
Your Focus Area 3 (as written)	❍	❍	❍	❍	❍

Gaps. Please use the space below to provide any further detail to the gaps or concerns you identified in SOF education.

_____

Motivations. Select the motivations of greatest value to your organization when sending students to JSOU. Use only the ones you find most applicable.

- Additional Skill Identifier, Career Progression, College Credits, Networking & Partner Building, Operational Knowledge, Organizational Development, Professional Development, Professional Military Education Credit, Other (identified below)

Other motivation. Please provide "Other" motivation if used in previous question.

Current and Future.

What can JSOU do better to prepare SOF for current and future challenges?

Comments.

Please use the space below for any additional comments you wish to provide.

Email. (Optional) Please provide your email below if you would like an executive summary of the JSOU Vision Planning Review, once available. (End of Survey)

_____

APPENDIX F:

Illustration from the 2018 JSOU Faculty and Staff Handbook

Step 1: Look at the **RESULTS** first to determine what the course must accomplish.

Level 4 – Results	What measurable organizational benefits resulted from the education in terms such as productivity, efficiency and effectiveness?

Answer these questions

- What are the measure(s) of performance?
- What should the individual be able to perform once they complete the course and return to work?
- How is the performance going to be measured?

NOTE: Don't fall into the trap of designing a course without identifying the *measures of performance*?

Step 2: What **BEHAVIOR(S)** (Knowledge, Skills, or Abilities) need to be changed in the individual?

Level 3 – Behavior	To what extent did participants change their behavior back in the workplace as a result of the education?

Answer these questions

- To what degree will the participant apply what they have learned in the course when they return to work?
- What are the knowledge skills and abilities which affect the behavior?
- What level of Bloom's Taxonomy are they expected to perform?

Step 3: How is **LEARNING** going to be measured in the classroom?

Level 2 – Learning	To what extent did participants improve their knowledge, skills, and abilities (attitudes) KSAs as a result of the

	education?

Answer these questions

- To what degree will the participants acquire the intended knowledge, skills and abilities based on their participation in the learning event?
- How will learning be measured and recorded?
- What type of assessment will be developed to prove the individual successfully mastered the objectives and can perform once they return to the workplace?

Step 4: How are you going to develop a course that has a positive **REACTION** from the students?

Level 1 – Reaction	To what extent did participants find the education useful, challenging, well-structured, organized, and so on?

Answer these questions

- How are you going to make the learning effective?
- How are you going to make the learning efficient?
- How are you going to make the learning appealing?